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Service Paper

A follow-up study of hearing exam.



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SERVICE PAPER

A Follow-Up Study of Hearing Examinations
in Schools

Submitted by

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(B. Sc., in Health Education, Boston University, 1947)

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CHAPTER I

INTRODUCTION

The importance of testing the hearing of children in schools has long been recognized, and the 4A audiometer has been found to be the best method, so far, for testing of large groups of children.

"Even a slight handicap in hearing," write Breckenridge and Vincent," will retard a child's progress to the point that he is considered dumb, even though his flashes of intelligence when he has heard what is going on, may puzzle the teacher. Defective hearing was, and still is, more of a handicap than defective vision, since linguistic ability is at a great premium in the oldfashioned curriculum." ¹

In describing the 4A audiometer,² the American Association of School Administrators claim that "this type of audiometer involves the use of phonograph records and earphones. Each child hears in his ear-phones a series of numbers which decrease in loudness until he can no longer hear them. The child writes all the numbers he can hear. As many as forty children can be tested at the same time."³ Chenowith and

1 Marian E. Breckenridge and E. Lee Vincent, Child Development (Phila. and London: W.B.Saunders, Company, 1943), p.49

2 "Health in Schools," American Assn. of School Administrators, National Education Association, Washington, D.C. (1942), p.155.

3 See Appendix A, p. 90.

Selkirk write:¹ In recent years the audiometer has replaced all other methods for the accurate testing of hearing. It is more accurate, more constant, and more reliable than other tests." Turner² says, "The routine use of the audiometer is our greatest single aid in detecting hearing deficiencies. Because of the expense of the equipment, the use of the audiometer is still far from universal."

Nyswander,³ after making an extensive study with the 4A audiometer, the 2A audiometer, used by specialists to determine the amount of hearing loss for the various frequencies of vibration,⁴ ^{and} ^{the} with the aid of an otologist, came to the following conclusion with regard to the testing of hearing, namely: "If the data from our schools are characteristic of the city as a whole it appears that unless the 2A audiometer serves as a screening device which eliminates a large proportion of the cases, and unless the otologist serves in turn further to delimit the number of cases selected for the medical follow-up, it would be sufficient to administer the 4A audiometer test two or three times to individuals who showed loss of hearing by the first 4A test and then to turn these cases over

1 Laurence B. Chenoweth and Theodore K. Selkirk, School Health Problems (N.Y.: F.S.Crofts & Co., 1940), p. 226.

2 C.E.Turner, Principles of Health Education (New York: D.C.Heath and Co.,1940), p. 117.2 1.

3 Dorothy B.Nyswander, Solving School Health Problems; The Astoria Demonstration Study, The Commonwealth Fund (London: Geoffrey Cumberlege, Oxford Univ. Press, 1942),p.200.

4 Chenoweth and Selkirk,op.cit.,p.229

these cases over to the school nurse to follow through in much the same way as she does with the serious vision cases reported to her by the teacher."

In this study, the pupils were tested with a new 4A audiometer machine, and those who had a hearing loss of 9 decibels or more were retested a second time. Then the re-testing notices were sent home to the parents to notify them that their children had failed in the hearing test and to advise them to seek medical advice. Definite procedures were followed, after a period of time had elapsed, to find out what type of medical care each pupil had received, and if they had not received medical care, what the reason was. The period allotted for this intensive follow-up was from the middle of February to the end of May.

I. THE PROBLEM

The problem. A study of the nature, extent, results and effectiveness of pupils with hearing defects as revealed by audiometer examinations made as a part of the school medical examinations.

Statement of the problem. To find out from the student, teacher, parent and physician just what has been done for the pupils' ears, in cases where defects are suspected, or found, in hearing.

Procedures:

Testing. Each pupil examined in the course of this study was given at least two 4A audiometer tests,

with an interval of at least two weeks between tests, in order to rule out any possibility of the pupil's having a cold, at the time of the first test. The test was administered to all of the pupils in the 3rd, 4th, 5th and 6th grades in the elementary schools, to the 7th and 9th grades in the Junior High Schools, and to the 11th grade in the High School; as well as to all of the pupils who were known to have failed the hearing test in other years, and to all new pupils. The testing was done during the months of September and October, 1947.

Grading.--The grading was done according to the instructions given in a pamphlet issued by the Massachusetts Department of Public Health,¹ in 1946, all of the grading, in all of the schools, being done by the same person. Students were said to have failed the test in the 3rd, 4th, 5th and 6th grades if they were unable to hear two columns out of four down to, and including, the 9-decibel level; pupils beyond these grades were said to have failed if they were unable to hear down to, and including, 6-decibels.

Selection of pupils for this study.--The pupils who were included in this study have been found to have a loss of at least 12 decibels in one, or both ears. Nyswander

¹ Hearing Testing; Instructions for the Use of the Group Audiometer and Scoring Tests. Issued by the Massachusetts Dept. of Public Health, Boston, Mass., 1946. 6 pp.

recommends¹ the selection for a follow-up of only those students who showed a hearing loss of 15 decibels or more. The selection of 12 decibels represents a figure midway between the recommendations of the Astoria Study, in New York, and that of the Massachusetts Department of Public Health.

Notification of parents.-- All parents were notified through the mail if it was found that their children had a hearing loss of 12 decibels or more.² These notifications were sent out in the fall, shortly after the testing was finished.

Student interviews.--All students were interviewed who were to be included in this study, and a questionnaire was filled out in each case.³ These interviews were started in February 1948.

Teacher interviews.-- In the elementary grades, the pupil's teacher was interviewed; in the Junior High School, the Home Room teacher was interviewed; and in the Senior High School, the Guidance teacher most closely associated with the pupil was interviewed. Another questionnaire was filled in by each pupil⁴ during an interview which followed the student interview.

1 Dorothy B. Nyswander, op. cit., p. 200-201.

2 See Appendix B, p.91.

3 See Appendices C and D, pp. 92;93.

4 See Appendix E, p.94.

Parent interviews.-- The next step was that of a home visit to interview the parent, preferably the mother, and to fill out a questionnaire.¹ The interview stopped at this point if the pupil had not been given medical attention, but if he had been taken to the family physician, to an ear specialist, or a clinic, the questionnaires were filled out one step further.

The importance of such a home visit has always been emphasized, but very little has been written about the difficulties to be surmounted in making home visits successfully. It has been found that there is much sales resistance to be overcome in the process: the people in the homes seem to have experienced so many interruptions that they do not wish to be disturbed further. Moreover, they tend to think that anyone who knocks on their door is trying to sell them something.

Then, too, the majority of homes that are visited always seem to be located on the second or third floor. Hence, the first thing that appears in response to a knock either is a Boxer, or a Newfoundland, dog ready to spring down at the home visitor; and when the mother at last shows herself, and the visitor has made herself known and has told her business, she still has to compete with the barking dog, and always with the radio. Or, if such ills do not beset the home visitor, the mother may

¹ See Appendices F and G, pp. 95;96.

claim that she is housecleaning and therefore very busy, so that, after the visitor has stated the object of her visit and has been finally admitted, the mother is found to be in ~~ann~~uncooperative mood to answer all of the questions that must be put to her if the interviewer is to get all of the information that is required. Meanwhile, there may be still other distractions, too, during the home visit, such as the washing machine running in the kitchen, a cake burning in the oven, or some child who is desperately ill and demands the mother's attention; also there are the "pre-schoolers" who are convinced that the visitor is there solely for their entertainment.

Again, there is the other side of the picture, the harrassed mother who is always delighted to talk about her family with anyone who will listen. She goes on and on, the visitor trying desperately, meanwhile, to get in a question.

This picture of the home visit could not be looked upon as complete without mention being made of homes where there never seems to be anyone home in daylight hours, or of houses in which, the postman on the route says he has been trying to rouse some one for two years without success. In such cases, the visitor knows that she might as well give up, too, and make some other plan

through which to interview the parent.

The ideal way to make a home visit, it would seem, is to telephone first, and make an appointment to see the parent; then the mother is ready to greet the home visitor, and everything is satisfactory sous tous les rapports. Today, however, with so many mothers working, and so many mothers and children being evicted from their homes, such a procedure is possible only in the smallest percentage of cases.

The medical questionnaire.¹-- As the medical history in most cases had to be looked up in medical files, it was found to be impossible to have the medical questionnaires filled in by the personal interview method. The Massachusetts Eye and Ear Infirmary, for instance, preferred to have such forms sent to the Social Service Department, where the student's record could be easily looked up and the information gleaned could be filled in against the questions which were put down. But, however, after this had been done, it was found that not only did another visit have to be made to the Massachusetts Eye and Ear Infirmary to complete the data, but also letters had to be sent to the Supervisor of the Out-Patient Department. In the process, it was found that all of the records of this big hospital are kept

¹ See Appendix H, p. 97.

in one central record room. The Boston Dispensary requested that a personal visit be made to obtain the information needed from that institution, which was done; and at St. Elizabeth's Hospital, the Out-Patient Department not only looked up the necessary information at once but was willing to give it over the telephone.

In the case of private physicians and ear specialists (otologists), usually a letter, enclosing the questionnaire to be filled out, was written to them; but here, too, some personal interviews had to be held. The best response to the questionnaires came from the otologists, the poorest from the family physicians.

Explaining the need of medical care to the pupils' parents.-- It seems to be difficult for parents to realize the necessity of having their children seek medical aid when they apparently hear all right, even though they do fail in the audiometer test. In cases where the parents themselves had noticed that their child was deaf, they could readily see that he, or she, needed medical attention; but it was that group of parents and pupils who kept saying, "I can hear all right" or "He can hear all right," with whom it was the most difficult to deal.

At the time the home visit was made, the parent, or parents, was shown a sheet similar to the one that

the pupil was asked to fill out at the time of the test.¹ It was pointed out then to the parent, she and the visitor reading together down the sheet, just how much her child could hear, and how much of the test he did not hear. It was possible, in this way, to convince the parent more quickly that it would be a good preventative measure to have her son, or daughter, seek medical attention.

The usual reply by the mother, to the statement that "her child had failed the audiometer test," was that "he had not been paying attention." Thereupon, it had to be pointed out to the parent that the test was given to over 2,500 pupils; it was given in a very quiet room; if the pupil failed the test once it was given to him again; and that, since only 33 pupils had failed the second test, it would seem reasonable to assume, if her child were one of those who had failed--he probably having done as well on the test as he was physically able to do at the time--that there must be some reason for his failure, namely, because he did not hear.

The town.--

Kind of community.--- Watertown, the town decided upon in which to base the study, is an

1 See Appendix A, p. 90.

industrial community with, according to the State Census of January 1945, a population of 37, 438 people.¹ (This town was chosen, in 1947, by the Tuberculosis Association to which to launch their Massachusetts X-Ray program, because it was such a representative community.)

Kind of homes.--- The majority of the students interviewed lived in two-family houses, the next highest number lived in single houses, mostly of the poorer type, and the least number lived in tenements. One lived with relatives, because the family had been evicted; and another lived in one room with his father.

Number of schools.--- In Watertown there are seven elementary schools, two Junior High Schools, and one Senior High School. The school enrollment was approximately, 5,000 as of November 1947; 5,024 as of March 1947.

Facilities.---Watertown is within the 10-cent carfare limit of the Massachusetts Eye and Ear Infirmary, whose standing is unexcelled in New England. At that medial institution there is the Winthrop Foundation, staffed by a group of specialists who deal entirely with deafness. Also at the

1 Watertown Town Report, 1945, Eaton Press, Watertown, Mass.

laboratories scientists are working on otosclerosis, one of the principal causes of deafness, and its relief by the fenestration operation.¹ Besides this Infirmary, there are many other excellent clinics in the various hospitals in and around Boston. Watertown has but one otologist. In Boston, however, there are many otologists who possess excellent backgrounds.

There is the "Boston Guild for the Hard of Hearing" in Boston, where students may be referred for audiometer tests, and where they may take the "pure tone" audiometer test and the 6A audiometer test. These individual tests are given by specially trained personnel to determine the amount of hearing loss for the various frequencies of vibration. This 6A test is replacing the 2A audiometer test. In the summer of 1948, the Boston Guild will conduct a class to train children to use their ear phones, and to give them, also, speech training. Attendance at this class is being recommended by the Massachusetts Eye and Ear Infirmary.

The Horace Mann School for the Deaf, also located in Boston, admits students with various degrees of hearing loss. At present, there is only

¹ Leaflet referring to the work of the Winthrop Foundation, Massachusetts Eye and Ear Infirmary, Boston, Mass, 1947.

one student enrolled in that institution from Boston, as it happens, the sister of one of the pupils whose case history has been discussed in this study.

There never has been money appropriated for the care of the ears, as money was appropriated "for eyeglasses and spectacles for needy school children."¹ In cases where families are willing to apply to the city for funds from the Welfare Society, then they are eligible for medical aid; but, as yet, there has been no provision made for medical care for that large group of people who can manage to feed, clothe and house themselves and their children, but "just can't afford medical aid." One of the pupils mentioned in this study, for example, was helped in paying for his medical care with funds given by the Salvation Army, a private organization.

¹ Guide to the School Health Program, School Health Series No. 3, Division of Child Hygiene, Massachusetts Department of Public Health, Second Revision, 1940. p.70.

CHAPTER II

DATA

The following case histories of the 33 pupils who were made the subjects of this study have been arranged in alphabetical order according to grades in the school. They tell briefly what the student, the school, the home and the medical profession, know about each student insofar as such information pertains to the hearing ability of each student.

I. CASE HISTORIES OF STUDENTS IN THIS STUDY

Case No. 1.- the student was born on April 18, 1938, and is in the 3rd grade. This is the first notification he has received regarding his care. His hearing loss is right ear 12 decibels and left ear 3 decibels. He is a diabetic and subject to frequent urination, thus he is out of the room a great deal of the time. He is being given a follow-up by a diabetic specialist to help his diabetes.

The teacher did not know that the student suffered from a hearing loss as it is not apparent in class. To the former the child represents a problem due to his many absences from school and because, when he is in school, he goes out of the room so frequently. He is a slow child. He moves slowly, and he thinks slowly, so is not a good student. The mother has been contacted many times regarding her son's constant absences from the room but looks upon them as being necessary. The

teacher contends , however, and with justification, that because the child misses so much he loses interest so that, if he does not know the answer to something, or if he should feel bored, he conveniently leaves the room.

The parent mother was cleaning house when the home visitor called, therefore was not very anxious to see anyone. The boy in question has had his tonsils and adenoids removed, but he has had no history of ear trouble. When the mother received the notification she took him to an ear specialist.

The ear specialist diagnosed the condition as chronic middle ear catarrh, Sinusitis, caused by Sinusitis. He gave him treatment for the condition and told him to return again for a check-up. The prognosis was good.

Case No. 2.--

This student was born on September 22, 1938, and is in the 3rd grade. He says that he knows he needs to have his tonsils taken out but that his father first must earn some more money. His hearing loss is 12 decibels in the right ear and 9 decibels in the left ear. This is the first notification concerning the need of medical care that he has had.

His teacher did not know for sure that the child had a hearing loss although she had begun to suspect it because he was so lackadaisical, and was out of school so much on account of ill-health. For while he is a healthy-looking

teacher contends, however, and with justification, that because the child knows so much he loses interest so that, if he does not know the answer to something, or if he should feel bored, he conveniently leaves the room.

The parent mother was cleaning house when the home visitor called, therefore was not very anxious to see anyone. The boy in question has had his tonsils and adenoids removed, but he has had no history of ear trouble. When the mother received the notification she took him to an ear specialist.

The ear specialist diagnosed the condition as chronic middle ear catarrh, Alimentary, caused by Stomatitis. He gave him treatment for the condition and told him to return again for a check-up. The prognosis was good.

Case No. 2.--

This student was born on September 28, 1928, and is in the 3rd grade. He says that he knows he needs to have his tonsils taken out but that his father first must earn some more money. His hearing loss is 12 decibels in the right ear and 9 decibels in the left ear. This is the first notification concerning the need of medical care that he has had. His teacher did not know for sure that this child had a hearing loss although she had begun to suspect it because he was so lackadaisical, and was out of school so much on account of ill-health. For while he is a healthy-looking

boy and is a fair student, his frequent absences are beginning to tell on the quality of his work. He has a singular habit of turning his head, that may be due to a difficulty in hearing. He had a seat in the middle of the room at school.

His parent mother says that she has not yet had a chance to take her son to see about his ears, since she has measles in the family; but she does have a family physician and says she will take the child to see him as soon as she has the opportunity. In a later interview, the mother told the home visitor that she had made the necessary appointment to see the physician; and this was done.

The family physician, in a telephone conversation, said that the child seemed to have no pathological condition in his ears. He did find, however, that he had a persistent cough, therefore he had sent him to the Middlesex Sanitarium to have a chest X-Ray. This had been done, and the doctor said that ^{he} was waiting to get a written report of the X-Ray.

Case No. 3.--

The student was born on May 22, 1938, and, when tested, was in the 3rd grade in school. He has since been demoted to the 2nd grade. His hearing loss is right ear 0 and left ear 18. This was the first notification he had received. He came from Italy about two years ago.

The teacher noticed that he could not hear very well and was very anxious to have his ears tested. She considered that

boy and is a fair student, his frequent absences are beginning to tell on the quality of his work. He has a singular habit of turning his head, that may be due to a difficulty in hearing. He had a seat in the middle of the room at school. His parent mother says that she has not yet had a chance to take her son to see about his ears, since she has measles in the family; but she does have a family physician and says she will take the child to see him as soon as she has the opportunity. In a later interview, the mother told the home visitor that she had made the necessary appointment to see the physician; and this was done.

The family physician, in a telephone conversation, said that the child seemed to have no pathological condition in his ears. He did find, however, that he had a persistent cough, therefore he had sent him to the Midwestern Sanatorium to have a chest X-ray. This had been done, and the doctor said that was waiting to get a written report of the X-ray.

Case No. 3--

The student was born on May 22, 1933, and, when tested, was in the 3rd grade in school. He has since been promoted to the 2nd grade. His hearing loss in right ear 0 and left ear 15. This was the first notification he had received. He came from Italy about two years ago. The teacher noticed that he could not hear very well and was very anxious to have his ears tested. She considered that

that it was not his lack of comprehension but his lack of hearing which caused him to fail the test: she had frequently observed that, although he sat in the middle of the room where he got a good deal of attention, he could not hear directions which were given to the class. He is very popular with the other children, she finds. It was reported that when he first came to school he was placed in the Special Class and there was given individual attention.

The parent mother came to the school to be interviewed, after the home visitor had gone to the home but had found no one there. The mother had come to this country ten years ago, leaving her two-months old baby with her mother. She had a brother in America, and it was decided that she should come over first and have the family follow later. Her husband had been drafted into the Italian Army; thus the family were not reunited again until, on October 24, 1946, they met together over here. It was difficult, therefore, to secure any of the child's early history as the mother did not hear anything of her family in Italy for a long time, during the war. When he first arrived in this country he had colds frequently and his ears began to discharge, so that his mother took him to a physician. When she received the notification of her son's ear condition she took him to see an ear specialist. He was given some ear drops and told that he needed a tonsil and adenoid operation.

that it was not his lack of comprehension but his lack of hearing which caused him to fail the test: she had frequently observed that, although he sat in the middle of the room where he got a good deal of attention, he could not hear directions which were given to the class. He is very popular with the other children, she thinks. It was reported that when he first came to school he was placed in the Special Class and there was given individual attention.

The parent mother came to the school to be interviewed, after the home visitor had gone to the home but had found no one there. The mother had come to this country ten years ago, leaving her two-months old baby with her mother. She had a brother in America, and it was decided that she should come over first and have the family follow later. Her husband had been drafted into the Italian Army; thus the family were not reunited again until, on October 21, 1945, they met together over here. It was difficult, therefore, to secure any of the child's early history as the mother did not hear anything of her family in Italy for a long time, during the war. When he first arrived in this country he had colds frequently and his ears began to discharge, so that the mother took him to a physician. When she received the notification of her son's ear condition she took him to see an ear specialist. He was given some ear drops and told that he needed a tonsillectomy and adenoid operation.

The ear specialist gave as his diagnosis, catarrhal deafness. The treatment recommended was a tonsil and adenoid operation, which took place. His naso-pharynx was treated, and he was told to return to the physician for a check-up. His prognosis was good.

Case No.4.--

The student was born on August 8, 1938, and is in the 3rd grade in school. His hearing loss, according to the test, was 12 decibels in the right ear and 3 decibels in the left ear. This was the first notification he had received with regard to a hearing loss.

The teacher did not know this child had a hearing loss, as there were no indications of it apparent in the class. He does good work, but he exhibits quite a temper and is inclined to be rather stubborn.

His mother received the notice telling her of her child's hearing loss, but she did nothing about it because, she said, she is working part-time. She gave the same reason when she was telephoned to the second time, in an effort on the part of the home visitor to see if she had taken her son to receive medical care. She had been working, she stated, and had not had time, but she promised to go the next week. One week later, the teacher reported that the boy had been to the doctor's to see about his ears.

The family physician found nothing wrong with the child's

ears, but said that his loss of hearing stemmed from enlarged tonsils and adenoids. He made an appointment to have these removed on June 24.

Case No. 5.--

The student was born on the 9th of November, 1939, and is in the 3rd grade. Her hearing loss is 18 decibels in the right ear and 12 decibels in the left ear. This is the first time that she had failed the audiometer test; but it is not the first time that the school teacher has talked with the mother about her lack of hearing. The girl herself is conscious of the fact that she does not hear very well since she does not hear her mother when she calls.

The teacher was aware that the child did not hear very well, and because of that, she had her placed near the front of the room. She finds her to be quite young for her age, acting like a baby, and wanting to play all the time. She says she is not up to the other students in the class, and is not doing the type of work she should be doing.

The parent mother said that her daughter had had difficulty in hearing since her birth. At the time that she first had been notified by the school, she took her to the Cambridge Hospital, where they advised a tonsil and adenoid operation, which was performed; but one week after the operation had taken place, she suffered a hemorrhage. The family physician and a nose and throat specialist were called in

and a surgical operation was performed hurriedly in the middle of the night, at home. Thereafter, her hearing seemed to improve. It is very evident to the mother that she does not hear around the house. When the notification was received following the second test, she took her daughter to an ear specialist and had ear treatments, but these were discontinued when the mother became ill. The mother was interviewed by the home visitor in bed, where she had been for three months, following her return from the hospital one month before. It was learned that she had a serious kidney complication and would have to spend at least one month more in bed, after which she would not be allowed to do much work for a long time. Nevertheless, she realized that her daughter's ear condition was serious; and she said she would see that she resumed her ear treatments as soon as it could be arranged.

The ear specialist has diagnosed the child's condition as acute suppurative otitis media right ear that is caused by hypertrophied lymphoid tissue in the naso-pharynx. He said she should continue the treatments until cured. While her prognosis is good, she does need treatment.

Case No. 6.

The student was born on March 23, 1937, and is now in the 3rd grade. His hearing loss is 21 decibels in the right ear and 0 decibels in the left ear. This is the first school

notification concerning his hearing that he has received.

The teacher said that although there are no indications of a hearing loss in class, she knew that the child was hard of hearing because the mother had told her. Although in class he is a retiring child and his work is of poor quality, his attendance, this year, has been good. He is quite popular with the girls in the room.

The parent mother says that her son has had trouble with his ears ever since he was two years old. He has suffered from ear aches, and "running" ears, and sometimes she has found blood on his pillow in the morning from his ears. She did not notice, however, that he did not hear well until he began to attend school. He had a tonsil and adenoid operation in 1946, but that was of no help. Prior to this, he had scarlet fever, at which time his physician feared he might contract rheumatic fever. She says that every time he has a cold, his hearing difficulty increases. His grandmother, who, however, is 75, is hard of hearing, while his mother had a perforated eardrum in 1927 but seems to have recovered without suffering complications. This mother, who is a nurse, and tries to give her children good medical and dental care, has had her son under medical care since his birth. After she was notified that he had failed the audiometer test, she took him to an ear specialist who gave him X-Ray treatments in an effort to shrink the tissue around the Eustachian tube. He

was given three treatments and told to come back in about three months, which he did. The doctor then was quite pleased with his condition. He is to go back to the specialist again in the autumn for an audiometer test and a general check-up of the ear. Besides all of this difficulty, it has been found, he has a history of abscessed ears. The family physician and the ear specialist together have recommended injections of penicillin to be given the day the abscess starts to form, and again the next day. This treatment appears to have had a good effect in reducing the severity of the abscesses and in reducing their number. For instance, he has had only two abscesses this year, as against four to six in former years, and too, this year he has missed only four days of school, as against three to four weeks in preceding years; thus the mother feels greatly encouraged.

The ear specialist gives as his diagnoses: (1) chronic non-suppurative otitis media and tubitis, (2) hypertrophied lymphoid tissue in nasopharynx, (3) impairment of hearing, bilateral conduction type, secondary to (1 and (2). The treatment given was X-Ray therapy, applied to the nasopharynx in an endeavor to reduce the amount of lymphoid tissue and thus clear the orifices of the Eustachian tubes. His prognosis is good. He has an appointment to return in November for further treatment.

Case No. 7.--

The student was born on September 9, 1937, and is now

repeating the 3rd grade. His hearing loss was right ear 3 decibels and left ear 15 decibels.

The teacher did not know he had a hearing loss as it is not evident in class. He was required to repeat grades 1 and 2, since he is not a good student.

The aunt, who lives with the family, was interviewed because the mother was away at the time. She said that they had received the notification regarding the boy's ears, and she knew of no reason which would have prevented the parents from taking him to have medical care. He has no history of ear aches, or of running ears. He has not had his tonsils removed.

The mother, in a later interview, told that it was lack of money which kept her from taking her boy to the doctor for treatment; and that, with five children and today's cost of living to meet it was difficult to manage. She wanted to take him to her own otologist. She has a brother who is deaf for cause unknown, and she herself is hard of hearing, perhaps, her otologist tells her, because she had punctured her eardrum. With such a family history, therefore, she feels that her son should be taken to a specialist. Mother and son related the identical story when asked if he had ever had any ear trouble, namely, that when a small child he received a terrific blow on the left side of the face from a baseball.

The ear specialist gives as his diagnosis, nerve deafness in the left ear, chronic tonsillitis and adenoids. His prognosis is fair. He says a tonsil and adenoid operation

should be considered, but suggested no treatment for the ears.

Case No. 8.

The student was born on April 10, 1938, and is now in the 3rd grade. His hearing loss was 3 decibels in the right ear and 15 decibels in the left ear. This was the first notification that he had received regarding his hearing loss.

The teacher did not know that the child had a hearing loss although it was noticed that he had experienced difficulty with his work, especially with reading. In fact, he is such a reading problem that the teacher used him for a study in remedial reading. In his particular work, he and his classmates work at small tables, but ordinarily he sits near the front of the room.

The mother, after receiving the notice and a visit from the home visitor, took him to an eye specialist. She could give no history of ear troubles, and he has not had running ears, or ear aches. She was planning, at some time, to have his tonsils removed.

The ear specialist gave as his diagnosis, hypertrophied tonsils from a congested tube from tonsil and adenoid infection. His prognosis is excellent. An appointment has been made to have his tonsils and adenoids removed on June 24, 1948.

Case No. 9.

The student was born on the 23rd of September, 1937, and

should be considered, the suggested no treatment for the ears.

Case No. 2.

The student was born on April 10, 1935, and is now in the 3rd grade. His hearing loss was 3 decibels in the right ear and 15 decibels in the left ear. This was the first notification that he had received regarding his hearing loss. The teacher did not know that the child had a hearing loss although it was noted that he had experienced difficulty with his work, especially with reading. In fact, he is such a reading problem that the teacher read him for a study in remedial reading. In this particular work, he and his classmates work at small tables, but ordinarily he sits near the front of the room.

The mother, after receiving the notice and a visit from the home visitor, took him to an eye specialist. She could give no history of ear troubles, and he has not had running ears, or ear aches. He was planning, at some time, to have his tonsils removed.

The ear specialist gave as his diagnosis, hypertrophic tonsils from a congested nasopharynx and adenoids in location. His prognosis is excellent. An appointment has been made to have his tonsils and adenoids removed on June 24, 1935.

Case No. 3.

The student was born on the 23rd of September, 1937, and

is now in the 3rd grade. His hearing loss is 3 decibels in the right ear and 12 decibels in the left ear. This was the first notification he had received concerning his ears. He had to repeat both the 1st and the 2nd grades, but will not have to repeat his grade this year.

The teacher had not noticed that he had any difficulty in hearing, since there have been no indications of it in class. While he is rather likeable, he is not a good student which the teacher put down to lack of parental control.

The parent mother, upon receipt of the notice, took her son to the Boston Dispensary. When he was a baby he had some trouble with the glands at the back of his ears, but when he favored his left ear the family thought it was just a habit. He was hospitalized at the Boston Floating Hospital in November of the last year because of an infected ear. His case is now being followed up at the Boston Dispensary. He suffered from ear aches during the last summer vacation. His father and mother are both slightly deaf.

The clinic, namely, the Boston Dispensary, gave the child an audiometer test and it was found that he suffered a 20 per cent loss in the left ear and a 7 per cent loss in the right ear. It advised that he attend a lip-reading class, and then be rechecked at the Dispensary in six months.

His hospital diagnoses, at the Boston Floating Hospital and at the Boston Dispensary were, respectively: external ear

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The teacher had not noticed that he had any difficulty

in hearing, since there have been no indications of it in class. While he is rather likeable, he is not a good student which the teacher put down to lack of parental control.

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His hospital diagnosis at the Boston Floating Hospital and at the Boston Dispensary were, respectively: external ear

infection, impetigo of the right ear, and dermitis, post-auricular, with gland involvement; and catarrhal condition of the ear. His prognosis was questionable as he had some nerve involvement.

Case No. 10.

The student was born on September 19, 1938, and is now in the 4th grade. This was the first notice she had received. Her hearing loss is 12 decibels in the right ear and 9 decibels in the left ear. Since the beginning of 1948 she has lost ten pounds. She has a very poor posture, seems to be undernourished, and shows a lack of home care. She had 20:50, 20:50 vision without glasses.

The teacher knew that the child had hearing difficulty because, at times, she would ask to have repeated what had just been said. She was placed in the front of the room. As her learning ability seems to be average, it was felt that her physical condition as a whole was retarding her progress.

The parent mother could give no history of ear trouble. It was quite difficult to make the proper contact with her since she works every day, and she had to be interviewed just as she was about to prepare supper, after a hard day's work. When she received the notice from the school with regard to her daughter's hearing loss, her loss in weight, and her poor posture, and also received a telephone call from the school nurse to the effect that it was important for her

infection, infection of the right ear, and deafness, post-
auricular, with glial involvement; and deafness condition
of the ear. The prognosis was questionable as he had some
nerve involvement.

Case No. 10.

The patient was born on September 19, 1938, and is now
in the 4th grade. This was the first notice she had received
her hearing loss as 12 decibels in the right ear and 3
decibels in the left ear. Since the beginning of 1938 she
has lost ten pounds. She has a very poor posture, seems to
be underweight, and shows a lack of home care. She had
30:50, 30:50 vision without glasses.

The teacher knew that the child had hearing difficulty
because, at times, she would ask to have repeated what had
just been said. She was placed in the front of the room. As
her learning ability seems to be average, it was felt that
her physical condition as a whole was retarding her progress.
The patient mother could give no history of ear trouble.
It was quite difficult to make the proper contact with her
since she works every day, and she had to be interviewed
just as she was about to prepare supper, after a hard day's
work. When she received the notice from the school with re-
gard to her daughter's hearing loss, her loss in weight, and
her poor posture, and also received a telephone call from the
school nurse to the effect that it was important for her

daughter to have medical care, however, she took her to see the family physician.

The family physician gave as his diagnosis, diseased tonsils and adenoids. He advocated their removal, which was done. He said then that the prognosis would now be good. He placed the child on multi-vitamine tonic and told her to return to him for a follow-up.

Case No. 11.

This student was born on December 24, 1937, and is in the 5th grade. His hearing loss is 3 decibels in the right ear and 12 decibels in the left ear. This was the first notification he had received regarding his ears.

The teacher did not know that the boy had a hearing loss, although she found he was a little slow in following directions. He sits in the front of the room. He does average work.

The boy's sister was the only person at home who could be contacted, who attends the High School. She stated as the reason why the mother had not already taken the boy to be given medical care, a lack of time. The mother works five days a week and on Saturday mornings; she, however, had talked a lot about it and was planning to take him to the doctor.

In two other interviews, this time with the boy, he said his mother planned to take him, and had made an appointment. The physician's questionnaire then was given to him,

daughter to have medical care, however, she took her to see the family physician.

The family physician gave an initial diagnosis, diagnosed tonsillitis and adenoids. He advocated their removal, which was done. He said then that the prognosis would now be good. He placed the child on multi-vitaminic tonic and told her to return to him for a follow-up.

Case No. 11.

This student was born on December 24, 1937, and is in the 5th grade. His hearing loss is 3 decibels in the right ear and 12 decibels in the left ear. This was the first notification he had received regarding his ears.

The teacher did not know that the boy had a hearing loss, although she found he was a little slow in following directions. He sits in the front of the room. He does average work.

The boy's sister was the only person at home who could be contacted, who attends the High School. She stated as the reason why the mother had not already taken the boy to be given medical care, a lack of time. The mother works five days a week and on Saturday mornings; she, however, had talked a lot about it and was planning to take him to the doctor. In two other interviews, this time with the boy, he said his mother planned to take him, and had made an appointment. The physician's questionnaire then was given to him.

in an envelope containing a stamped envelope addressed to the school. Since this questionnaire was not returned by the physician to the school, it is assumed the appointment had not been kept.

Case No. 12.

The student was born on August 17, 1936, and is now in the 5th grade. His hearing loss in the right ear is 0 decibels and in the left ear, 18 decibels. He insists that there is nothing the matter with his ears and that the wires got crossed on his audiometer phones. This was the first notification that he received with regard to his hearing.

His teacher did not know that he had a hearing loss, as there have been no indications of it in class. He sits in the front of the room, but for no particular reason. He is a good student and does good work.

His parents, father and mother, did not take him to the doctor to see about his ears after they had been notified, because it did not seem necessary. The mother next door, they learned, had been sent a note suggesting that she take her little boy to have his eyes examined and it turned out that his eyes were all right; so it would be a waste of money. The home visitor at last succeeded in convincing the mother that there must have been some reason why her son had failed the hearing test, and she promised to take him to the doctor; which, as yet, has not been done. In two later interviews

in an envelope containing a stamped envelope addressed to the school. Since this questionnaire was not returned by the physician to the school, it is assumed the appointment had not been kept.

Case No. 12.

The student was born on August 17, 1938, and is now in the 5th grade. His hearing loss in the right ear is 5 decibels and in the left ear, 18 decibels. He insists that there is nothing the matter with his ears and that the wires got crossed on his amplifier phones. This was the first notification that he received with regard to his hearing.

His teacher did not know that he had a hearing loss, as there have been no indications of it in class. He sits in the front of the room, but for no particular reason. He is a good student and does good work.

His parents, father and mother, did not take him to the doctor to see about his ears after they had been notified, because it did not seem necessary. The mother next door, they learned, had been sent a note suggesting that she take their little boy to have his eyes examined and it turned out that his eyes were all right; so it would be a waste of money. The home visitor at first succeeded in convincing the mother that there must have been some reason why her son had failed the hearing test, and she promised to take him to the doctor; which, as yet, has not been done. In two later interviews

with the boy, he said that his mother was working and did not have time to take him, and that, anyhow, he could hear all right. However, the physician's questionnaire was given to him to be given to his mother for the doctor, in case she should decide to take him later.

Case No. 13.

The student was born on September 20, 1936, and is in the 5th grade in school. Her hearing loss is 0 decibels in the right ear and 12 decibels in the left ear. This was the first notification that she had received about her ears.

The teacher did not know that the pupil had failed the hearing test, as there have been no indications of a hearing difficulty in class. She sits in the middle of the room and is a very bright pupil.

The parent mother cannot remember having been notified about trouble with her daughter's ears. She has not had her tonsils or adenoids removed. She had a history of various ear aches about five years ago, but has had none since. The mother will take her to St. Elizabeth's Hospital, where she always takes her children.

The clinic, St. Elizabeth's Hospital Out-patient Department, in its diagnosis, classed her ears as negative. They were syringed out and wax was removed. Her prognosis is good.

with the boy, he said that his mother was working and did not have time to take him, and that, anyhow, he could hear all right. However, the physician's questionnaire was given to him to be given to his mother for the doctor, in case she should decide to take him later.

Case No. 15.

The student was born on September 20, 1938, and is in the 5th grade in school. Her hearing loss is 0 decibels in the right ear and 12 decibels in the left ear. This was the first notification that she had received about her ears. The teacher did not know that the pupil had failed the hearing test, as there have been no indications of a hearing difficulty in class. She sits in the middle of the room and is a very bright pupil.

The parent mother cannot remember having been notified about trouble with her daughter's ears. She has not had her tonsils or adenoids removed. She had a history of various ear aches about five years ago, but has had none since. The mother will take her to St. Elizabeth's Hospital, where she always takes her children.

The Clinic, St. Elizabeth's Hospital Out-patient Department, in its diagnosis, checked her ears as negative. They were syringed out and wax was removed. Her prognosis is good.

Case No. 14.

The student was born on April 3, 1937, and is now in the 5th grade. Her hearing loss is 3 decibels in the right ear and over 30 decibels in the left ear. This was the second notification that she had received about her ears.

The teacher noticed that the child was hard of hearing. She said that it was very noticeable; that she had to have her oral instructions repeated constantly, even though she has been placed near the front of the room in class. Apparently, however, her loss of hearing makes no difference to her progress as she came third in her room on achievement tests given recently.

The parent mother took her daughter to an ear specialist after she received the notification from the school. The following ear history was uncovered: when the child was four years old, she had undergone a double mastoid operation at the Children's Hospital; and, at that time, the mother was told that the child would probably lose her hearing in her left ear. (This loss her mother did not notice until she went to school, then she failed the first audiometer test.) After the mastoid operation, the mother said, the child failed to gain in weight like a normal young person. After consultation with the family physician, it was decided that her tonsils should be removed; in spite of which, today, she is much smaller than other girls of her age. After the mother had received the first school notification, she took the child

The student was born on April 3, 1937, and is now in the 5th grade. Her hearing loss is 5 decibels in the right ear and over 50 decibels in the left ear. This was the second notification that she had received about her ears. The teacher noticed that the child was hard of hearing. She said that it was very noticeable; that she had to have her oral instructions repeated constantly, even though she has been placed near the front of the room in class. Apparently, however, her loss of hearing makes no difference to her progress as she came third in her room on achievement tests given recently.

The parent mother took her daughter to an ear specialist after she received the notification from the school. The following ear history was uncovered: When the child was two years old, she had undergone a double mastoid operation at the Children's Hospital; and, at that time, the mother was told that the child would probably lose her hearing in her left ear. (This loss her mother did not notice until she went to school, then she called the first audiometer test.) After the mastoid operation, the mother said, the child failed to gain in weight like a normal young person. After consultation with the family physician, it was decided that her tonsils should be removed; in spite of which, today, she is much smaller than other girls of her age. After the mother had received the first school notification, she took the child

again to the family physician, who recommended that she consult an ear specialist. Meanwhile, the parents refrain from calling attention to the child's deafness in her hearing.

The ear specialist gives as his diagnosis, progressive deafness in left ear, caused by post-operative mastoid scar tissue. The prognosis is poor for her left ear. He advised against the use of a hearing aid lest it cause deafness in the right ear, which, at present, is normal. There has been 11 2/3 per cent loss of hearing in the left ear in two years. She has been told to return to the specialist for a check-up in one year.

Case No. 15.

This student was born on June 24, 1935, and is in the 6th grade in school. This is the first notification she had received with regard to her lack of hearing.

The teacher did not know that there was a hearing loss because there were no evidences of it in class. She was placed in the front of the room, but not because of her lack of hearing ability. When she entered the 6th grade room she was very poorly prepared, and the teacher thinks that she will do only low grade work when she goes into the 7th grade, next year.

The parent mother supports the family. She says she has been waiting until she has her vacation to take her daughter to the Massachusetts Eye and Ear Infirmary for examination,

again to the family physician, who recommended that she consult an ear specialist. Meanwhile, the parents refrain from calling attention to the child's deafness in her hearing. The ear specialist gives as his diagnosis, progressive deafness in left ear, caused by post-operative mastoidectomy. The prognosis is poor for her left ear. He advised against the use of a hearing aid but it causes deafness in the right ear, which, at present, is normal. There has been 11 2/3 per cent loss of hearing in the left ear in two years. She has been told to return to the specialist for a check-up in one year.

Case No. 13.

This student was born on June 24, 1935, and is in the 5th grade in school. This is the first notification she had received with regard to her lack of hearing. The teacher did not know that there was a hearing loss because there were no evidences of it in class. She was also at in the front of the room, but not because of her lack of hearing ability. When she entered the 5th grade room she was very poorly prepared, and the teacher thinks that she will do only low grade work when she goes into the 7th grade next year.

The parent mother supports the family. She says she has been waiting until she has her vacation to take her daughter to the Massachusetts eye and ear laboratory for examination.

since, if she should take a day off from work, she would lose a whole day's pay. She considers that "the school gets excited at nothing, and that she has to think twice before she takes her children to the doctor. For example, the last time that the school had sent the child home because of a spot in her eye that was troubling her, and when the family physician could do nothing and they finally got to an eye doctor, it was only to find out that it was in her eye, and had always been there." The mother could recall no history of ear trouble. Her child had never had her tonsils out. She never suffered from ear ache. Frequently, however, she has a severe nose bleeding.

Case No. 16.

The student was born on August 18, 1936, and is in the 6th grade. Her hearing loss in the right ear is 15 decibels, and in the left ear 12 decibels. In 1945, she had a hearing loss of 15 decibels in the right ear and 3 decibels in the left, hence this was the second notification that she had received. She realizes herself that she cannot hear, and says that she cannot hear the teacher in class.

The teacher, too, knows that the child cannot hear, it is so evident. Even though she sits in the front seat, she still does not hear. She is an attentive child, but slow, and talks in a very low voice. The teacher considers that her hearing loss does retard her progress.

since, if she should take a day off from work, she would lose a whole day's pay. The complaint that she should have to sit at nothing, and that she has to think twice before she takes her children to the doctor. For example, the last time that the school had sent the child home because of a spot in her eye that was troubling her, and when the family physician could do nothing and they finally got to an eye doctor, it was only to find out that it was in her eye, and had always been there. The mother could recall no history of ear trouble. Her child had never had ear trouble out. She never suffered from ear noise. Frequently, however, she has a severe nose bleeding.

Case No. 18.

The student was born on August 18, 1925, and is in the 8th grade. Her hearing loss in the right ear is 15 decibels, and in the left ear 12 decibels. In 1945, she had a hearing loss of 15 decibels in the right ear and 5 decibels in the left, hence this was the second notification that she had received. She realized herself that she cannot hear, and says that she cannot hear the teacher in class. The teacher, too, knows that the child cannot hear, it is so evident. Even though she sits in the front seat, she still does not hear. She is an attentive child, but slow, and talks in a very low voice. The teacher considers that her hearing loss does retard her progress.

The parent mother was interviewed. She said that although her family physician had told her, three years ago, that she should have her daughter's tonsils out, the Massachusetts General Hospital, where she goes, does not recommend it as yet. She had an abscess about three months after the first test was given, and one about three years ago. She told that when her child was in the 5th grade she suffered from ear ache and ringing in her ears. At the time the home visitor interviewed the mother she had made two visits to the Massachusetts General Hospital with her child, and she felt that they were getting nowhere. However, she had another appointment that she had promised to keep; and her daughter was to have another hearing test. The question of her hearing has been discussed at home. The grandmother is deaf as a result of scarlet fever.

The clinic at the Massachusetts General Hospital made diagnosis that the child's condition was that of conduction hearing loss, bilateral. Her prognosis is that her hearing will not improve. The cause of the ear defect is a question of otitis media. She is to return for another hearing test, therefore was given an appointment. The clinic did not advise getting a hearing aid at present, but did say that she should attend a lip-reading class. Accordingly, on May 8, 1948, she was given another test and it was learned that she hears very few conversation tones. A secondary tonsil and adenoid operation was advised, and a date set for it.

Case No. 17.

The student was born on December 14, 1936, and is in the 6th grade. His hearing loss in the right ear is 6 decibels, and in the left ear, 12 decibels. As his excuse for not having received medical care for his ears, the lad said that he had been too busy having medical care for other things: he had had his appendix removed; also he had been obliged to get new glasses. In fact, he thought, his mother must have forgotten about it since she had taken him back to the hospital three or four times. He goes to the Children's Hospital.

The teacher knew that the boy had failed the hearing test, although there are no indications of it in class. He sits in the second seat. He does very well in school.

His parent, mother said that when her son was very young, between one and three years old, he suffered greatly from ear ache; and one ear had to be lanced. He has not had his tonsils and adenoids removed, but had his appendix out during this past winter. Again, when he was eight years old, at the time he was circumcised, he bled for four days. As the doctors at the hospital thought he might be a so-called bleeder, the mother regularly takes him back to the Children's Hospital to have treatments to offset such bleeding. She did intend, she said, to see about his ears but other things had intervened. She intends to see that he has medical care for his ears.

At a later interview, made to see if the child had been

The student was born on November 14, 1935, and is in the 8th grade. His hearing loss is the right ear is 3 decibels, and in the left ear, 12 decibels. As the excuse for not having received medical care for his ears, the fact that he had been too busy having medical care for other things: he had had his appendix removed; also he had been obliged to get new glasses. In fact, he thought, his mother must have forgotten about it since she had taken him back to the hospital three or four times. He goes to the Children's Hospital.

The teacher now that the boy had failed the hearing test, although there are no indications of it in class. He sits in the second row. He does very well in school. His mother said that when her son was very young,

between one and three years of age, he suffered greatly from ear aches; and one ear had to be lanced. He has not had his tonsils and adenoids removed, but had his appendix and during this past winter, again, when he was eight years old, at the time he was circumcised, he died for four days. At the doctors at the hospital thought he might be a so-called diabetic, the mother regularly takes him back to the Children's Hospital to have examinations to detect such things. She did intend, and said, to get about his ears but other things had intervened. She intends to see that he has medical care for his ears.

At a later interview made to see if the child had been

given medical treatment, the boy explained that he had badly pronated feet and had to have special shoes. Even though this boy is not getting medical care right away for his ears, it is felt that his mother does intend to see to it when more pressing things are not crowding her.

Case No. 18.

The student was born on December 1, 1935, and is now in the 6th grade. She represents the textbook example of the child who does not hear well--talks in a whisper most of the time. Her hearing loss in the right ear is 24 decibels, and in the left ear of 3 decibels. This was the first notification she had regarding a hearing loss.

The teacher knew that the child did not hear well, it was so evident in class. In the beginning, the teacher thought she was not giving attention, since she is very languid, cannot concentrate, and consistently does poor work. Fortunately, since she speaks in a whisper, the other children do not notice her deafness. She does not sit in the front of the room.

The parent mother has had twelve children. One of them died last September (1947) from tuberculosis, and one was born in March 1948. The family, which has lived in Watertown only for the past two years, has been X-Rayed, and were negative. The mother wanted to take the child under discussion to the Massachusetts Eye and Ear Infirmary, since they

giving medical treatment, the boy explained that he had badly
promoted fast and had to have special shoes. Even though
this boy is not getting medical care right away for his ears,
it is felt that his mother does intend to see to it when
some pressing things are not troubling her.

Case No. 18.

The student was born on September 1, 1933, and is now in
the 8th grade. She represents the textbook example of the
child who does not hear well--talks in a whisper most of
the time. Her hearing loss in the right ear is 25 decibels,
and in the left ear of 5 decibels. This was the first noti-
fication she had regarding a hearing loss.
The teacher knew that the child did not hear well, it
was so evident in class. In the beginning, the teacher thought
she was not giving attention, since she is very timid,
cannot concentrate, and consistently does poor work. Partly
naturally, since she speaks in a whisper, the other children do
not notice her distress. She does not sit in the front of
the room.

The parent mother has had twelve children, one of them
died last September (1947) from tuberculosis, and one was
born in March 1949. The family, which has lived in Watertown
only for the past two years, has been X-rayed, and was
negative. The mother wanted to have the child under observa-
tion to the audiologist for ear infection, since they

as a family all were known there; and she claims that this will be done as soon as she feels physically able to take her in. A telephone call to the mother, however, revealed that nothing had been done. When it was suggested that if she did not have the money to cover the expense, funds might be found to take care of the situation, the mother replied that she did not need funds and would go as soon as she could.

Still later, in an interview with the student, it was found that she had not yet been taken to the clinic for the necessary medical attention. Thus it would seem as if more follow-up work were needed in order to make sure that the student had been placed under medical care.

Case No. 19.

The student was born on October 16, 1935, and is in the 7th grade. She is a good student. Her hearing loss, however, is 3 decibels in the right ear and 12 decibels in the left ear. This was the first notification of ear trouble that she had received.

The teacher was not aware that the child had a noticeable hearing loss, since it was not evidenced in class. However, she had been placed in a front seat in the room.

The parent mother, after she had been notified about her daughter's hearing loss, immediately got in touch with the school to see what she had better do. She said that she lived next door to their family physician. She was advised to

as a family all were known there; and she claims that this will be done as soon as she feels financially able to take her in. A telephone call to the mother, however, revealed that nothing had been done. When it was suggested that if she did not have the money to cover the expense, funds might be found to take care of the situation, the mother replied that she did not need funds and would go as soon as she could. Still later, in an interview with the student, it was found that she had not been taken to the clinic for the necessary medical attention. Thus it would seem as if more follow-up work were needed in order to make sure that the student had been placed under medical care.

Case No. 19.

The student was born on October 16, 1933, and is in the 7th grade. She is a good student, her hearing loss, however, is 3 decibels in the right ear and 12 decibels in the left ear. This was the first notification of ear trouble that she had received.

The teacher was not aware that the child had a noticeable hearing loss, since it was not evidenced in class. However, she had been placed in a front seat in the room.

The parent mother, after she had been notified about her daughter's hearing loss, immediately got in touch with the school to see what she had better do. She said that she lived next door to their family physician. She was advised to

take her daughter to him and, if so advised, to take her afterwards to an ear specialist. She went, therefore, to the family physician. The child's history showed that last year she had several ear aches that, the mother said, were not very serious ones; but she did have running ears, and she had suffered from one ear infection, before she had the audiometer test. She had had her tonsils and adenoids removed. It was learned that there are two uncles on the father's side who are deaf.

The family physician was one of those persons from whom it was difficult to get a report. A telephone call, a personal visit, and two letters became necessary before it could be learned how he had diagnosed the case. His diagnosis was acute otitis media. Her prognosis was good. She was taken to him every week for three weeks, or until her ears had stopped running; and he gave her drops for her ears. He then pronounced her cured, and told her that she did not need to return again unless the condition became active again.

Case No. 20.

The student was born on August 14, 1935, and is in the 7th grade. His hearing loss in the right ear is 30 decibels, and in the left ear 3 decibels. When he was living in Utica, New York, at the age of eight years, he had had his first notification that he had a hearing loss.

His teacher did not realize that the child had a hearing

take her daughter to him and, if so advised, to take her
afterwards to an ear specialist. She went, therefore, to the
family physician. The child's history showed that last year
she had several ear aches that, the mother said, were not
very serious ones; but she did have running ears, and she
had suffered from one ear infection, before she had the
audometer test. She had had ear fungus and adenoids removed.
It was learned that there are two uncles on the father's
side who are deaf.

The family physician was one of those persons from
whom it was difficult to get a report. A telephone call,
personal visit, and two letters became necessary before it
could be learned how he had diagnosed the case. His diagnosis
was acute otitis media. Her prognosis was good. She was taken
to him every week for three weeks, or until her ears had
stopped running; and he gave her drops for her ears. He then
pronounced her cured, and told her that she did not need to
return again unless the condition became active again.

Case No. 30.

The student was born on August 14, 1935, and is in the
7th grade. His hearing loss in the right ear is 30 decibels,
and in the left ear 3 decibels. When he was living in Utica,
New York, at the age of eight years, he had had his first
notification that he had a hearing loss.
His teacher did not realize that the child had a hearing

difficulty as he shows no indication of it in class. He is a good student, although he does not volunteer much information and is inclined to hold back. He has a pleasing personality.

His parent mother learned that her son could not hear well while they still lived in New York, at which time she had received a notification from the school, and had taken him to an ear specialist. Then, a tonsil and adenoids operation had been advised and had taken place; the lad had his ears cleared of wax, and had been given ear drops to use.

She received another notification last year, following which the home visitor made the usual investigation; but the parents did nothing about it. It seems to be an example of a family of apparent education and social prestige who cannot be impressed with the seriousness of the boy's hearing loss, and need of medical care. The only ear history that could be obtained was that, when the child was five years old, he had received a severe blow on the side of his head; that his paternal grandmother is deaf and wears a hearing aid; and that his father is beginning to be deaf.

The family physician says that he had advised, last year, the parents to take their son to the Boston Guild for the Hard of Hearing to have an ear test, after which he intended to advise that they take him to an ear specialist; but, so far, nothing has been done. He feels that either this is a case where the parents knew all about the condition and intended,

difficultly as he shows no indication of it in class. He is a good student, although he does not volunteer much information and is inclined to hold back. He has a pleasing personality.

His parent history learned that his son could not hear well while they still lived in New York, at which time she had received a notification from the school, and had taken him to an ear specialist. Then, a tonsil and adenoid operation had been advised and had taken place; the lad had his ears cleared of wax, and had been given ear drops to use.

She received another notification last year, following which the home visitor made the usual investigation; but the parents did nothing about it. It seems to be an example of a family of apparent education and social position who cannot be impressed with the seriousness of the boy's hearing loss, and need of medical care. The only ear history that could be obtained was that, when the child was five years old, he had received a severe blow on the side of his head; that his paternal grandmother is deaf and wears a hearing aid; and that his father is beginning to be deaf.

The family physician says that he had advised, last year, the parents to take their son to the Boston Child for the kind of hearing to have an ear test, after which he intended to advise that they take him to an ear specialist; but, so far, nothing has been done. He feels that often this is a case where the parents know all about the condition and intend,

eventually, to do something about it; or else, that they have a complex about the situation which they unwilling to face.

Case No. 21.

The student was born on July 29, 1933, and is now in the 9th grade. Her hearing loss is 3 decibels in the right ear, and 30 decibels in the left ear. This is the first notification she had received this time, but she says that she has always had to take the audiometer test over again, in previous years.

The teacher knew of the pupil's hearing difficulty because the latter had told her, otherwise she might not have noticed it. She says the girl is cooperative and willing to do more than her share. Thus, unless a teacher were on the alert, it would not be noticed that there was a hearing loss. She was placed in a front seat in class. She works very hard, is most conscientious, and is a good student.

The parent mother sent the child, with her father, to an ear specialist, soon after she had received the notification from the school. After five visits for treatment, her condition seemed to be greatly improved. She has an ear history that has existed since she was a young child; she has suffered from running ears constantly, and consequently, has made many visits to the family physician; also she has had a tonsil and adenoid operation; and she is the only child of a father who is somewhat deaf from a blow received during the First World

eventually, to do something about it; or else, that they have a complex about the situation which they unwilling to face.

Date No. 21.

The student was born on July 23, 1935, and is now in the 8th grade. Her hearing loss is 2 decibels in the right ear, and 30 decibels in the left ear. This is the first notification she had received this time, but she says that she has always had to take the audiometer test over again, in previous years.

The teacher knew of the pupil's hearing difficulty because the latter had told her, otherwise she might not have noticed it. She says the girl is cooperative and willing to do more than her share. Thus, unless a teacher were on the alert, it would not be noticed that there was a hearing loss. She was placed in a front seat in class. She works very hard, is most conscientious, and is a good student.

The parent teacher sent the child, with her father, to an ear specialist, soon after she had received the notification from the school. After five visits for treatment, her condition seemed to be greatly improved. She has an ear history that has existed since she was a young child; she has suffered from running ears constantly and consequently, has made many visits to the family physician; also she has had a vocal and adenoid operation; and she is the only child of a father who is somewhat deaf from a blow received during the first world

War. The mother and father speak very little English, so that their daughter had to serve as an interpreter during the interview with the home visitor.

The ear specialist diagnosed the child's condition as Hypertrophied lymphoid tissue in nasopharynx, bilateral effectus Otitis media, with healed perforations in both ears. The treatment used was radium therapy in the tubal area. Her prognosis was good. She is to return to the specialist for treatments again, when necessary.

Case No. 22.

The student was born on April 14, 1932, and is now in the 9th grade. He has received notices every year since he first had an audiometer test, in 1943, regarding his ear condition. His hearing loss in the right ear, in that year, was 3 decibels in the right ear, and 30 decibels in the left ear; in 1944, his hearing loss was 0 decibels in the right ear, and 30 decibels in the left ear; in 1947, his hearing loss was 3 decibels in the right ear, and 30 decibels in the left ear. He realizes now that he cannot hear anything with his left ear.

The teacher said that he did not know the boy had a hearing loss although he was definitely inattentive in class. He was treated normally by his classmates, therefore they could not have noticed any peculiarity; and he apparently heard directions adequately. It was reported

War. The mother and father speak very little English, so that their daughter had to serve as an interpreter during the interview with the home visitor.

The ear specialist diagnosed the child's condition as hypertrichosis lanuginosa congenita, bilateral otitis media, with bilateral perforations in both ears. The treatment used was vacuum therapy in the tubal area. Her prognosis was good. She is to return to the specialist for treatment again, when necessary.

Case No. 22.

The student was born on April 14, 1942, and is now in the 5th grade. He has received notices every year since he first had an audiometer test. In 1943, regarding his ear condition, his hearing loss in the right ear, in that year, was 5 decibels in the right ear, and 30 decibels in the left ear; in 1944, his hearing loss was 0 decibels in the right ear, and 30 decibels in the left ear; in 1945, his hearing loss was 5 decibels in the right ear, and 30 decibels in the left ear. He realizes now that he cannot hear anything with his left ear.

The teacher said that he did not know the boy had a hearing loss although he was definitely inattentive in class. He was teased mostly by his classmates, therefore they could not have noticed any peculiarity; and he apparently heard directions adequately. It was reported

that he is well known to all of the teachers, since he has been a definite problem in the school; he has been known to be rude to teachers and principals alike; and the teaching staff feels that his hearing loss does not altogether account for his surly disposition.

The parent mother, who is a school teacher-mother of two children, this son and one daughter, has to support the family as there is no father. She says she does know of her son's condition and poor adjustment in school, but thinks that some blame should be put upon his ear difficulty since, when his ears discharge, she notices that he is unusually cranky. His case history is that, when he was about two years old he had scarlet fever and was sent to the Haines Memorial Hospital, and, while there, he developed a mastoid condition. He had a "plastic" done on his ear, but it did not hold. Whenever he gets a cold, he suffers from running ears, is sent to the family physician. The latter gives him ear drops but claims that nothing else can be done. His tonsils have been removed.

The family physician gives as diagnosis, catarrhal deafness, due to mastoiditis and otitis media. His prognosis is poor. The treatment recommended was ear drops. The doctor does not recommend, however, either the wearing of a hearing aid or attendance at a lip-reading class; nor does he think it necessary to refer him to an ear specialist.

that he is well known to all of the teachers, since he has been a definite problem in the school; he has been known to be rude to teachers and principals alike; and the hearing itself feels that his hearing loss does not altogether account for his unruly disposition.

The parent mother, who is a school teacher-another of two children, this son and one daughter, has to support the family as there is no father. She says she does know of her son's condition and poor adjustment in school, but thinks that some thing should be put upon his ear differently since when his ears discharge, she notices that he is unusually cranky. His case history is that, when he was about two years old he had scarlet fever and was sent to the Barnes Memorial Hospital, and, while there, he developed a mastoid condition. He had a "plastic" done on his ear, but it did not hold. Whenever he gets a cold, he suffers from running ears, is sent to the family physician. The latter gives him ear drops but claims that nothing else can be done. His tonsils have been removed.

The family physician gives as diagnosis, otitis media, poor, but no mastoiditis and otitis media. His prognosis is poor. The treatment recommended was ear drops. The doctor does not recommend, however, either the wearing of a hearing aid or attendance at a lip-reading class; nor does he think it necessary to refer him to an ear specialist.

Case No. 23.

The student was born on August 20, 1931, and is in the 10th grade in school. This is the first year (1948) that she has gone to public school, thus this is the first notification she has received regarding her ears. She, however, has been studying lip-reading and, her teacher says, is very good at it. Her hearing loss is 3 decibels in the right ear and 12 decibels in the left ear.

The teachers--all those she has had through the different grades-- never noticed that she had a hearing loss, since it was not apparent. She was a good student, making grades of B plus, or better.

The parent mother told that if the wind blows, or when she has a cold, her daughter suffers from ear ache. Her case history is that, when she was about five years old, she was taken to the Cambridge Hospital to have a mastoid operation; but after she was discharged, she was not returned for check-up as her mother did not realize that it was important to do that. She says that she will take her child immediately to an ear specialist. It also was found that the student has a sister who is deaf: she has a hole in one ear and, when she has a cold, she cannot hear in that ear at all, and otherwise has difficulty in hearing; in one ear she is quite unable to hear. She has been taken to different types of specialists, who claim they cannot help her hearing. It is possible,

too, that the parents are of the same opinion.

A follow-up interview gave the following information: She had suffered a pain in her abdomen and was subjected to an X-Ray in order to find out what was wrong; but she had been given no medical care for her ears. It was suggested, therefore, that at the same time that she is having treatment for her abdominal condition, she might have the family physician examine her ears to see if she needs to be referred to an ear specialist. This suggestion was well taken.

The family physician diagnosed the girl's condition as catarrhal sinusitis. Her prognosis is good. She is to return for further treatment, he says.

Case No. 24.

The student was born on June 24, 1930, and is in the 11th grade. His hearing loss in the right ear is 3 decibels, and in the left ear, 15 decibels, as against the results gained from the audiometer test in 1942, when his hearing loss in the right ear was 9 decibels and in the left ear, 21 decibels. His parents have been notified three times with regard to his hearing loss.

His teacher was aware that this pupil had difficulty in hearing and had assigned him to a seat in the front of the room. Although he is a slow learner, he manages to do passable work. The teacher finds him quite rude, at times, his

attitude being quite poor. This is probably due to the fact that he has a history of cardiac trouble which limits his play activities, and restricts him from gymnasium work. He is extremely sensitive about his heart condition and, as for his ears, he quite refuses to believe that there is anything wrong with them, and does his best to cover up his hearing loss.

His parent mother claims, too, that her son always has had a heart murmur; that he was a regular attendant at the cardiac clinic of the Children's Hospital until he was thirteen years of age, when that hospital discharged him to the Massachusetts General Hospital. In 1946, she said, she took him to the latter hospital about his ears, where she was told that, except to clean out the wax that was in them, they could do nothing for the boy. She has noticed that when her son's ears begin to discharge his state of tension is relieved. She told the visitor the boy said he did not try hard enough to hear the numbers, that he did not concentrate. In short, he will not admit that he needs to return to the clinic for regular check-up on his ears. Meanwhile, the family carefully refrain from saying anything about his heart condition because he is so very sensitive about it.

The clinic.--The Massachusetts Eye and Ear Infirmary had quite a hard time in locating the boy's record. However, after two letters had been sent, a visit was made to the social worker, and many calls had been made on the telephone

to the nurse in charge of the Out-patient Department, it was finally learned that the boy had been admitted to that department in 1943, with a diagnosis of discharging ears and perforation of both eardrums.

The boy was given treatment for his ears during the course of at least four visits, after which he was to have a tonsil and adenoid operation; but he did not turn up. The supervisor in charge of the Out-patient Department clinic considers that it would be worth his while to return again for treatments because there have been so many new advances made in the study of hard of hearing difficulties. Later, in a telephone conversation held with the mother, it was learned that he had had his tonsils taken out at another hospital. She was advised to take her son back to the Massachusetts Eye and Ear Infirmary for another check-up, and this she agreed to do.

Case No. 25.

The student was born on February 16, 1931, and is now in the 11th grade. His hearing loss is 3 decibels in the right ear and 21 decibels in the left ear. He claims that this was the first notification he had received but, before this, he has had to take the audiometer test over again. He says that he has learned to read lips with ease; but that, if any one should speak to him behind his left ear, he cannot hear him.

His teacher knew that this pupil had a hearing loss, and has had him seated in the front of the room. It is found that that while he has only normal learning ability, his responses are excellent. He is very ambitious and maintains a B average or better, and he is planning to go to college. His condition has not retarded his progress: he is a hard worker and is most cooperative.

His parent mother does not speak, or even understand, English very well. She gave his case history to the effect that when she had learned he had a hearing difficulty she took him to an ear specialist, who told her nothing could be done. He has an uncle who cannot hear well in one ear, so that she and her son think the condition may be hereditary. However, the boy has made up his mind that when they are in New York, this summer, a relative of his who knows of a good ear specialist will take him there. He is quite tired, he says, of having people yell at him from the rear because he has not heard them, which shows how sensitive he has become about his hearing loss. He has been taking lip-reading at the High School, and he reads lips so well that, when you talk to him, his hearing loss is not suspected.

The ear specialist gave as his diagnosis, total deafness in left ear, and Chronic Rhinitis. His prognosis is poor. The cause of the condition cannot be ascertained. The treatment recommended was for a nasal condition. But the boy, who is worried about his condition, has little faith in this ear

specialist.

Case No. 26.

The student was born on November 22, 1931, and is in the 11th grade. His hearing loss, at the time of the last audiometer test, this year, shows a marked decrease in hearing ability, namely, over 30 decibels in each ear. In 1939, his hearing loss was 3 decibels in the right ear and 30 decibels in the left ear; in 1940, it was 0 decibels in the right ear and 30 decibels in the left ear; in 1941, it was 9 decibels in the right ear and 30 decibels in the left ear; in 1942, it was 15 decibels in each ear--a condition that remained unchanged in 1944. Thus, the lad has known all about his hearing difficulty ever since he was in the 3rd grade.

His teacher knew that the pupil was hard of hearing, therefore he was assigned to a seat in the front of the room. His lip-reading becomes better as the year progresses and he becomes accustomed to reading his teacher's lips. Moreover, his teacher says that he improves as he adjusts, which causes him to do as well in school as if he had his hearing. He is found to have average ability, that is, he gets "C" in ability, and "C" in achievement. He does not adjust very well to his classmates, he being somewhat odd; but he gets along very well with his teachers. He attends a lip-reading class at the school.

Specialist.

Case No. 26.

The student was born on November 22, 1931, and is in the fifth grade. His hearing loss, at the time of the first audiometer test, this year, shows a marked decrease in hearing ability, namely, over 30 decibels in each ear. In 1933, his hearing loss was 3 decibels in the right ear and 30 decibels in the left ear; in 1940, it was 0 decibels in the right ear and 30 decibels in the left ear; in 1941, it was 0 decibels in the right ear and 30 decibels in the left ear; in 1942, it was 0 decibels in the right ear and 30 decibels in the left ear; in 1943, it was 15 decibels in each ear--a condition that remained unchanged in 1944. Thus, the lad has known all about his hearing difficulty ever since he was in the 3rd grade.

His teacher knew that the pupil was hard of hearing, therefore he was assigned to a seat in the front of the room. His lip-reading becomes better as the year progresses and he becomes accustomed to reading his teacher's lips. Moreover, his teacher says that he improves as he adjusts, which causes him to do as well in school as if he had his hearing. He is found to have average ability, that is, he gets "B" in ability, and "C" in achievement. He does not adjust very well to his classmates, he being somewhat odd; but he gets along very well with his teachers. He attends a lip-reading class at the school.

His parent mother has been taking her son to their family physician for years. The latter, at first, thought that there was nothing to be done for him since there is no history of ear aches, running ears, abscesses or such complaints. Finally, however, he referred him to an ear specialist at the Massachusetts Eye and Ear Infirmary, from which point he was referred to the Winthrop Foundation, representing a group of men who deal entirely with deafness, its diagnosis, prognosis and treatment at the Massachusetts Eye and Ear Infirmary.

The mother is disturbed because her son has so few friends of his own age, and since he has developed an inferiority complex resulting, she considers, from his hearing difficulties. For, not content with worrying about his own condition, the lad has begun to worry lest his two younger sisters become deaf. The baffling thing is, that, as yet, no doctor has been able to say just what has caused his deafness.

The hospital.--From his record at the Massachusetts General Hospital the diagnosis is possible otosclerosis; and he has been referred for a possible fenistration operation. In such cases, the prognosis is a 50 per cent chance of success in improvement of hearing.

Case No. 27.

The student was born on May 14, 1931, and is now in the

His parents mother had been taking her son to their family physician for years. The father, at first, thought that there was nothing to be done for him since there is no history of ear aches, running ears, discharges or such complaints. Finally, however, he referred him to an ear, nose and throat specialist at the Massachusetts Eye and Ear Infirmary, from which point he was referred to the Winthrop Foundation, representing a group of men who deal entirely with deafness, the diagnosis, prognosis and treatment at the Massachusetts Eye and Ear Infirmary.

The mother is disturbed because her son has so few friends of his own age, and since he has developed an inferiority complex resulting, she conspires, from his hearing difficulties. For, not content with worrying about his own condition, the lad has begun to worry lest his two younger sisters become deaf. The appalling thing is, that, as yet, no doctor has been able to say just what has caused his deafness.

The hospital.--From his record at the Massachusetts General Hospital the diagnosis is possible otosclerosis; and he has been referred for a possible radiation operation. In such cases, the prognosis is a 50 per cent chance of success in improvement of hearing.

Case No. 27.
The student was born on May 14, 1931, and is now in the

11th grade at school. When she had an audiometer test in 1942, her hearing loss was 15 decibels in the right ear and 18 decibels in the left ear. By 1947, it had changed to 3 decibels in the right ear and 30 decibels in the left ear.

The teacher realized that this pupil was hard of hearing but believes it is questionable whether, or how much, her hearing loss has retarded her progress. She has been placed well forward in the room at school. She is a slow learner and has to work very hard for what she gets. She has a negative personality, and is very reserved in manner.

The parent mother says that when she was first notified regarding her daughter's hearing loss, after the latter took the audiometer test in 1942, she took her to an ear specialist; and, since then, she has been taken periodically for a check-up. The case history of the child's difficulty is that, when she was two years of age, she had an abscessed ear that had to be opened by an ear specialist, following an attack of whooping cough; and that the father also is hard of hearing. This mother, who is a nurse, says that her child has not had a tonsil and adenoid operation.

The ear specialist gave as diagnosis, probable conduction deafness of unknown origin, and a question of otosclerosis. The prognosis is good for the right ear but is unfavorable for the left ear. He wants her to return for a check-up as he has not seen her for a year. Upon hearing

this message, the family promised to return to the specialist for a check-up within a couple of weeks.

Case No. 28.

This student was born on December 10, 1931, and is now in the 11th grade. This was the first notification she had received about her hearing loss from the school she is now attending, and she denies having had previous notices from the school from which she came. She reads lips very well, and has been clever in hiding her hearing loss from people. She attends a lip-reading class. This hearing loss is 18 decibels in the right ear and 30 decibels in the left ear. When the home visit was made she said that she had had a cold each time the audiometer test was made, and that she could hear all right. An appointment was made for her to go to the Guild for the Hard of Hearing to see if a better reading might be obtained; but she did not keep the appointment.

The teacher knew that this child was hard of hearing and has her placed in the front of the room. She is found to be well-adjusted. There are no apparent indications in class that she does not hear, as she watches lips carefully.

The parent mother gave the history of a mastoid condition that developed as a result of measles when the child was seven years old. She was operated on at the Massachusetts General Hospital. Again, two summers ago, when she

had an infection in one of her ears she went, as a private patient, to the same ear specialist who had operated on her ear at the Massachusetts General Hospital, and had treatment from him for two years. At a second interview with her, when she admitted that she had purposely forgotten, this year, to have the audiometer test, she was advised, since she had suffered so much hearing loss, to return to the specialist for another check-up.

The ear specialist gave as his diagnosis, right otomycosis. He says that her prognosis is good; that the condition had been relieved at the last visit; and that she should return for a check-up only when necessary.

Case No. 29.

The student was born on May 22, 1930, and is now in the 12th grade. He has known, ever since December 1940, that he suffers from a hearing loss. In that year, his hearing loss was 24 decibels in the right ear and 30 decibels in the left ear. The same amount of loss was registered in 1941. But by 1944, it was a loss of 30 decibels in the right ear and the same in the left ear. In 1947, conditions were found to be the same. During the interview, he did not find it necessary to have much of the conversation repeated to him, which proves that he must have learned to read lips.

His teacher knew that the boy was hard of hearing, and felt that this accounted largely for his being anti-social.

Also his classmates know that he is hard of hearing. Although he is a slow learner, he can be very superior in shop work and under such conditions he responds well. Thus, his hearing condition must undoubtedly account for his rather poor school work. He sometimes uses peculiar facial expressions, but, it is felt, this is done only to attract the attention of the class. He is one of the cleanest-looking boys at school.

The parent father was not at home when the home visitor first called, but he immediately afterwards made a visit to the school to tell his story. He told that his son had been born with no canal in his left ear, and there was only a very small opening in the other ear, the Children's Hospital authorities told the parents. They said that they could operate on the ears and make them look normal, but that was all. Following that visit, he was taken to the Massachusetts General Hospital where his condition was examined by many ear specialists under the belief that one or another might be able to help the boy's hearing. The father says, however, that the specialists are not unanimous in their agreement as to the outcome of an operation to such an end; hence it has been postponed. If the boy does not have an operation, it was advised, he should be fitted to a hearing aid. The boy's father and mother do not live together.

The clinic at the Massachusetts General Hospital, gave

as its diagnosis, bilateral conductive hearing loss, and stated that it was caused by congenital atresia of the canal. The prognosis given is, that there is good possibility that an operation should improve the child's hearing. If he did not have the operation, it was advised that he join a lip-reading class and that he be fitted to a hearing aid.

As to the operation, there seemed to be something of a controversy being carried on between the father and the hospital. The father claims that the specialists are not in any kind of agreement regarding the successful outcome of such an operation, while the hospital claims that the specialists are in agreement. The real facts of the case are, that the mother and father cannot seem to agree to having an operation. The boy, however, is willing to take a chance if the doctors think the operation will be worthwhile.

The boy was referred to the Vocational Rehabilitation Department with regard to his disability; and the worker there has been contacted and has made an appointment to see him. The social workers at the Massachusetts General Hospital also have been working on the problem. At the present time, the understanding is that he is to return to the Massachusetts General Hospital this summer, at which time it is hoped that a date can be set for the operation.

At a recent visit to the hospital to find out what has been decided about the boy, the social worker said

that no disagreement exists among the doctors but instead that all agree that the patient has nothing to lose in having such an operation, and there is a good chance that an operation will do him some good. As things stand now, he is to have the operation this summer.

Case No.30.

The student was born on March 9, 1929, and will graduate from the 12th grade this year. His hearing loss is 21 decibels in the right ear and 24 decibels in the left ear. In 1941, he had a hearing loss of 24 decibels in the right ear and 15 decibels in the left ear; in 1944, his hearing loss amounted to 15 decibels in each ear; and in 1945, it was 30 decibels in the right ear and 21 decibels in the left ear. To date, he has received four notices with regard to his hearing loss.

The teacher knew that the student was definitely hard of hearing, since instructions are not always heard by him, and he asks that sentences be repeated. He is a slow learner and is inclined to be anti-social. He sits in the front of the room. The teacher feels that his progress must have been retarded by his hearing loss, although he has managed to maintain a "C" average; but he has adjusted poorly in the classroom.

His parent mother related a detailed history of mastoids. He had one first, in one ear, when he was only three

months old, and one in the other ear when he was seven years old. Then, when he was nine years old he had a mastoid in each ear. At that time, the doctors at the Massachusetts Eye and Ear Infirmary told her that he probably would lose the hearing of both ears. She therefore is very thankful that the condition is no worse than it is and that her son has successfully gotten through High School. She says she also was told by the doctors, after the lad had recovered from the double mastoid he had at the age of nine years, that he should have nothing more done for his ears. As for the boy, he told her he had suffered so much from a constant examination of his ears that "he would rather be deaf" than return for more treatment. He attends a lip-reading class. He has been referred to the Vocational Rehabilitation Department because of his disability; but the family were not very cooperative with the worker there. He has a sister, sixteen years of age, who attends the Horace Mann School for the Deaf. When he was eleven years old, he was discharged from the Massachusetts Eye and Ear Infirmary, and told to return if his ears started to discharge. His ears ache when there is moisture in them; otherwise they are all right. He has been advised to return to the clinic for a check-up, but he refuses to go.

The clinic.--The Massachusetts Eye and Ear Infirmary, after a barrage of letters, interviews and telephone calls,

were finally able to locate a record on this student. It showed that when he was three years old he had a double mastoid operation at another hospital, and had come to the Infirmary with a superficial post-aural abscess and was admitted. There he underwent an adenoidectomy. He was discharged to the Out-patient Department for follow-up, and he had left there in good condition. It is advised by the hospital that he be returned for another hearing test not only because he should be under medical care but also because so much progress has been made in the study of deafness during recent years. The chances are, however, that he will not return.

Case No.31.

The student was born on June 12, 1935, and is in the Special Class. This is the second notification that she has received. Her hearing loss is 30 decibels in the right ear and 12 decibels in the left ear.

The teacher knew that this pupil could not hear, there were so many indications of it in class. She had tried to get cooperation with the mother in the matter, before this time. The girl is definitely retarded mentally, and fails to get along with the other girls; she likes to help with the kindergarten children. If she be thwarted, she sulks. In addition to her hearing loss she has a speech defect. Although she does not sit at the front of the room, it is a small room, and so she gets a great deal of individual attention.

The parent mother had realized that her daughter is not hearing well. Knowing that she is a backward child, however, it was assumed that she did not want to hear, and she had given little thought to it until the notification came from the school. As a child she had been sickly. She had had her tonsils removed. She has never complained of ear aches, nor has there been a discharge from her ears. In June 1946, she was examined by an otologist, upon recommendation by the teacher, when a hearing aid was advised and it was suggested that she attend classes in a school for the deaf. But the parents had not been convinced then of her need. The other members of the family are perfectly normal; there is no record of deafness.

The clinic diagnosed her condition as bilateral nerve-type hearing loss, with cause unknown; while the diagnosis of the otologist, in 1946, had been nerve deafness in both ears. Her prognosis is poor. She was told it would not improve. The clinic advised, as had the otologist, that she wear a hearing aid. After listening with the hearing aid on, she said that she heard her own voice, leading the doctors to think that she had not been accustomed to hearing herself speak; which may account in some measure for her speech defect. She was told to return in one year for a check-up.

The latest data regarding this pupil is that she was fitted to a hearing aid although she was not yet wearing it to school; and that she is to go to the class being conduct-

ed for children such as she is, for speech training and to learn how to use her hearing aid.

Case No. 32.

The student was born on October 16, 1934, and is in the Special Class at school. His hearing loss is 15 decibels in the right ear and 3 decibels in the left ear. This was the first notification he had received regarding his hearing.

The teacher did not know that the boy had failed the audiometer test, as his hearing difficulty is not evident in class. She considers that he could hear if he wished to do so. He is doing only a fair job in low 4th grade work.

The parent mother had to be interviewed at her place of business where she works every day and Saturdays. They have been evicted, and are now living in extremely cramped quarters. The family had lived in, and around, Watertown for many years, and a number of them have attended Special Classes. At the present time it is split up, but this lad lives with his parents. She gave as her reason for not taking him to receive medical care, the lack of money; therefore it was suggested that she take him in to the Guild for the Hard of Hearing, to have another test and see if he should go to an ear specialist. This was done, and it was found that he had a definite hearing loss. It was recommended there that he see an otologist, as he had suffered considerably, last summer, from ear aches. Arrangements have been made to provide funds so that he may have his

ears examined at the Massachusetts Eye and Ear Infirmary.

The clinic.-- The Massachusetts Eye and Ear Infirmary reported that the lad had come in to the Out-patient Department where, after examination, it was found that there was nothing obviously wrong with his ears and that his condition could not be diagnosed until an audiometer test had been given by them. An appointment was made, therefore, for him to return for a hearing test on June 22.

Case No. 33.

The student was born on September 28, 1934, and is in the Special Class. Her hearing loss is 12 decibels in the right ear and 3 decibels in the left ear, plus the fact that her ears are constantly discharging. This is the first notification that she had concerning her hearing loss.

Her teacher knew of the difficulty sh had been having with her ears but did not know that she had a hearing loss. While she does not sit in the front of the room, she gets special attention. The teacher thinks she should be able to do better work; she does 4th grade work now. She is no student.

The parent mother took her daughter to the Massachusetts Eye and Ear Infirmary to see about her ears, where she was told to come back twice, which she did. She is to return if necessary because of further trouble. The mother, who went to trade school for four years, wants to have the girl go there too, and to take her out of school. She has a case his-

tory of ear aches, running ears, and twice has had her ears lanced.

The clinic at the Massachusetts Eye and Ear Infirmary diagnosed the case as pain and discharge in the right ear. Treatment was given, and she was told to return in a week, which she did. The condition began to clear up. Her prognosis was good. She was told to return again if the ear started to discharge.

CHAPTER III

TABULATION OF THE DATA

The data gathered concerning the group that failed the audiometer tests in the Watertown, Massachusetts, school system, whose failure has been made the basis of this study, has been enumerated in tabular form.

Thus, Table Ia is concerned with the number of students who took the audiometer test, and the number who failed the tests, by schools.

TABLE Ia

NUMBER OF STUDENTS TESTED; NUMBER OF
STUDENTS FAILED: BY SCHOOLS

Name of School.	Number tested.	Number failed.	Enrollment, Nov. 1947.
(1)	(2)	(3)	(4)
Browne	251	1	420
Coolidge	252	5	438
East Junior High	407	3	528
Hosmer	302	4	594
Lowell	284	1	485
Marshall Spring	128	5	241
Parker	85	4	176
Phillips-Francis	193	1	405
Senior High	378	8	1151
West Junior High	380	1	586

Table Ia shows quite clearly, that in a group of ten schools tested there were found a comparatively small number of students who failed the audiometer test, although 2,660

students had taken the test.

The groups tested represent almost one-half of the schools' enrollment in November 1947. Thus, in the light of progress, it would seem essential that, automatically, all students who come into schools should be given the audiometer test.

The following Table, Ib, serves to indicate the number of students, by grades, who failed the audiometer test in each grade.

TABLE Ib

NUMBER OF STUDENTS TESTED; NUMBER OF THOSE
STUDENTS WHO FAILED: BY GRADES

By grades	Number failed	Number enrolled
(1)	(2)	(3)
Grade 3	9	329
Grade 4	2	339
Grade 5	3	330
Grade 6	4	351
Grade 7	2	337
Grade 8	-	363
Grade 9	2	400
Grade 10	1	435
Grade 11	6	346
Grade 12	1	365
Special	3	49
Totals	33	3644

The figures shown on Table Ib are quite significant, inasmuch as they call attention to the fact that certain grades had more failures to pass the audiometer test than did

others, namely, the 3rd Grade and the 11th Grade. But this analysis of the Table would be misleading to the uninitiated without some further explanation. In the first instance, the greater percentage of hearing loss showed up in the 3rd Grade because that is the first grade to be tested by the audiometer test in the schools; and in the second instance, a higher percentage of hearing loss is shown by the test since every pupil in that grade must be tested, in that system of schools, before taking up advanced High School work. Often the number of students is augmented in that grade, too, by reason of new students who come in from outside schools. It would seem safe to say, therefore, that if, regardless of days out from school, whether from illness or other cause, all students in each grade were to be automatically tested, then the number of failures to pass the test might increase in grades other than the 3rd and the 11th grades; and, as well, a greater number of school children might have their hearing defects discovered, and remedied, in the schools.

On Table II, will be found a more or less complete summation of the case histories pertaining to the thirty-three pupils, used in this study, who failed to pass the audiometer test and were recommended by the schools, through the home visitor to the parents, to have proper medical care. Also tabulated are all the details connected with the follow-up work of such recommendations.

TABLE II
SUMMARY OF CASE HISTORIES

Case No.	Grade	Age	H. l. in		Where pupils went for follow-up				T. & A. Mast.		Ear aches	Dischg ears	Abs.	First notfctn	Parents knew about h. loss	Takes lip read- ing	Lip read- ing advsd	H. a. advsd	H. of h. rels
			r. e.	l. e.	Fam. phy.	Ear spec.	clin.	Guild H. of H.	oper.	oper.									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1	3	10	12	-3	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0
2	3	9.6	12	9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
3	3	10	0	18	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0
4	3	9.5	12	3	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
5	3	8.4	18	12	0	1	0	0	1	0	0	0	0	1	1	0	0	0	0
6	3	10	21	0	1	1	0	0	1	0	1	1	1	1	1	0	0	0	0
7	3	10.9	3	15	0	1	0	0	0	0	0	0	0	1	0	0	0	0	Mo. & Unc.
8	3	10	3	15	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
9	3	10.6	-3	12	0	0	1	0	1	0	1	0	1	1	0	0	1	0	Mo. & Fa.
10	4	9.6	12	9	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0
11	5	10.3	-3	12	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
12	5	11.7	0	18	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0
13	5	11.6	0	12	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0
14	5	11	-3	30	1	1	0	0	1	1	0	0	0	0	1	0	0	0	0
15	6	12.9	-3	15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
16	6	11.7	15	12	0	0	1	0	0	0	1	0	1	0	1	0	1	0	Gmr.
17	6	11.3	6	12	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0
18	6	12.3	24	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
19	7	12.5	-3	12	1	0	0	0	1	0	1	0	0	1	0	0	0	0	Unc.
20	7	12.7	30	-3	1	0	0	0	1	0	0	1	0	0	1	0	0	0	M.g. of f.
21	9	14.7	3	30	0	1	0	0	1	0	1	1	0	1	0	0	0	0	Fa.
22	9	16	-3	30	1	0	0	0	1	0	1	1	0	0	1	0	0	0	0
23	10	16.7	3	12	1	0	0	0	0	1	1	0	0	1	0	1	0	0	Sis.
24	11	17.8	3	15	0	0	1	0	1	0	1	1	0	0	1	0	0	0	0
25	11	17.1	3	21	0	1	0	0	1	0	0	0	0	1	0	1	0	0	Unc.
26	11	16.4	30	30	1	1	1	0	0	0	0	0	0	0	1	1	1	0	0
27	11	17	-3	30	0	1	0	0	0	0	0	0	0	0	1	1	0	0	Fa.
28	11	16.3	18	30	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0
29	12	18	30	30	0	0	1	0	1	0	0	0	0	0	1	0	1	1	0
30	12	19	21	24	0	0	1	0	1	1	1	0	1	0	1	1	0	0	Sis.
31	Sp.	12.9	30	12	0	0	1	0	1	0	0	0	0	0	1	0	1	1	0
32	Sp.	13.5	15	3	0	0	1	1	1	0	1	0	0	1	0	0	0	0	0
33	Sp.	13.7	12	3	0	0	1	0	1	0	1	1	1	1	0	0	0	0	0
Totals					9	12	10	1	20	5	14	7	7	23	12	6	5	2	10

Abbreviations:

h. l.	- hearing loss	t. & a.	- tonsils and adenoids
r. e.	- right ear	mast.	- mastoid
l. e.	- left ear	dischg	- discharging
fam. phy.	- family physician	abs.	- abscess
spec.	- specialist	notfctn	- notification
clin.	- clinic	advsd	- advised
h. of h.	- hard of hearing	h. a.	- hearing aid
	rels - relatives		

mo. & unc.	- mother & uncle
mo. & fa.	- mother & father
gmr.	- grandmother
unc.	- uncle
m.g. of f.	- maternal grandmother of father
fa.	- father
sis.	- sister

SUMMARY OF

Case No.	Grade	Age	H. I. in decibels T. e. I. e.	Phys.	Spec.	Clin.	H. of H.	Guid	Follow-up	Where pupils went for
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	3	10	12	-3	0	1	0	0	1	0
2	3	9.8	12	9	0	0	0	0	0	0
3	3	10	12	0	0	1	0	0	1	0
4	3	9.8	12	3	0	0	0	0	0	0
5	3	8.4	12	12	0	1	0	0	1	0
6	3	10	21	0	0	1	0	0	1	0
7	3	10.3	12	3	0	1	0	0	1	0
8	3	10	12	3	0	1	0	0	1	0
9	3	10.8	12	-3	0	1	0	0	1	0
10	4	9.8	12	12	1	0	0	0	0	0
11	5	10.3	12	-3	0	0	0	0	0	0
12	5	11.7	12	0	0	0	0	0	0	0
13	5	11.8	12	0	0	1	0	0	0	0
14	5	11	30	-3	0	1	0	0	1	0
15	5	12.9	12	-3	0	0	0	0	0	0
16	5	11.7	12	12	0	0	0	0	0	0
17	5	11.3	12	3	0	0	0	0	0	0
18	6	12.3	24	3	0	0	0	0	0	0
19	7	12.8	12	-3	1	0	0	0	1	0
20	7	12.7	30	-3	1	0	0	0	1	0
21	9	14.7	30	3	0	1	0	0	1	0
22	9	15	30	-3	0	1	0	0	1	0
23	10	15.7	12	3	1	0	0	0	1	0
24	11	17.8	12	3	0	1	0	0	1	0
25	11	17.1	21	3	1	1	0	0	1	0
26	11	18.4	30	30	1	1	0	0	1	0
27	11	17	30	-3	0	1	0	0	1	0
28	11	16.8	30	18	0	1	0	0	1	0
29	12	18	30	30	0	1	0	0	1	0
30	12	19	21	24	0	1	0	0	1	0
31	Sp.	12.9	30	12	0	1	0	0	1	0
32	Sp.	13.8	12	3	0	1	0	0	1	0
33	Sp.	13.7	12	3	0	1	0	0	1	0

Abbreviations:	
H. I.	- hearing loss
T. e.	- right ear
I. e.	- left ear
fam. phy.	- family physician
spec.	- specialist
clin.	- clinic
H. of H.	- hard of hearing
relatives	- relatives
T. & S.	- tonsils and adenoids
meas.	- measles
discharge	- discharging
abs.	- absent
notification	- notification
advised	- advised
hearing aid	- hearing aid

A survey of Table II should be most illuminating since the various tabulations show the extent of trouble to which the schools are willing to go in order to assist pupils who have hearing loss.

Thus, nine pupils go to their family physicians for ear treatment after notification by the school, ten go to clinics, and one goes to the Boston Guild for the Hard of Hearing.

Twenty of the pupils enumerated in this study have had their tonsils removed; five have had mastoid operations; fourteen have a history of ear aches; and seven have a history of discharging ears. Seven of the pupils have had abscesses that required surgical treatment. Ten pupils (and their families) claim they have relatives who either are hard of hearing, or are totally deaf.

Six pupils in the High Schools are now taking classes in lip-reading. Lip-reading has also been recommended for five other pupils, three of whom are in the elementary schools and do not attend lip-reading classes at the present time.

Twenty-three parents were notified for the first time regarding the hearing defects of their children, while twelve of those parents knew, before they received the school notification, that their children suffered from hearing loss.

Thus, much valuable information can be gleaned from the tabulations enumerated, and recorded, which should be of help in regard to future work to be done in this important field.

A survey of 2,112 pupils in 111 schools in the
the various school systems show the extent of pupils to which
the schools are willing to go in order to assist pupils who
have hearing loss.

Thus, many pupils go to their family physicians for ear
treatment when attention by the school, can be of value,
and are sent to the doctor with the idea of hearing.

Twenty of the pupils mentioned in this study have had
their hearing removed; five have had mechanical operations; four
can have a history of ear aches; and seven have a history of
discharging ears. Seven of the pupils have had abscesses that
required surgical treatment. Ten pupils (and their families)
claim they have relatives who either are hard of hearing, or
are totally deaf.

Six pupils in the 111 schools are now wearing glasses
in lip-reading. Lip-reading has also been recommended for
five other pupils, three of whom are in the elementary schools
and do not attend lip-reading classes at the present time.
Twenty-five pupils were notified for the first time re-
garding the hearing defects of their children, while twelve
of those parents know, before they received the school notify-
nation, that their children suffered from hearing loss.
One, much needed, information can be obtained from
the conditions suggested, and reported, which would be of
help in regard to future work to be done in this important
field.

The following Table gives the information gained, and the procedures carried out, in regard to medical care of the thirty-three students in the schools who failed the audiometer test.

TABLE III

MEDICAL INFORMATION CONCERNING THIRTY - THREE PUPILS
WHO FAILED THE AUDIOMETER TEST

Case number	Diagnosis	Cause	Prognosis
(1)	(2)	(3)	(4)
1.	Chronic middle ear catarrh-sinusitis.	Sinusitis.	Good.
2.	Ears negative	Unknown. Chronic cough-chest X-Ray advised.	Good.
3.	Catarrhal deafness.	Hypertrophied ton- sils and adenoids.	Tonsils & ade- noids removed. Nasopharynx treated. Prog- nosis good. Good.
4.	Hyper tonsils and adenoids.	Very enlarged adenoids.	Good.
5.	Acute suppurative Otitis media, right ear.	Hypertrophied lym- phoid tissue in nasopharynx.	Good.
6.	(1) Chronic non- suppurative otitis media and tubitis; (2) Hypertrophied lymphoid tissue in nasopharynx. (3) Impairment of hearing, bilateral conduction type, secondary to (1) and (2).	Otitis media; Hyper- trophied lymphoid tissue in naso- pharynx.	Good. Treat- ment, X-Ray therapy to nasopharynx.
7.	Nerve deafness left ear; chronic tonsil- litis and adenoid- itis.	Nerve type; Question of mumps or a blow.	Fair. Tonsil and adenoid operation to be con- sidered.

The following Table gives the information gained and the procedures carried out in regard to medical care of the thirty three students in the school who failed the endometer test.

TABLE III

MEDICAL INFORMATION CONCERNING THIRTY-THREE STUDENTS WHO FAILED THE ENDOMETER TEST

Case number	Diagnosis	Course	Prognosis
(1)	(2)	(3)	(4)
1.	Chronic middle ear catarrh-sinusitis.	sinusitis.	Good.
2.	Ear negative	Unknown, chronic cough-sinusitis X-ray advised.	Good.
3.	Catarrhal deafness.	hyperthyroidism - thyroiditis and sinusitis. advised.	Good.
4.	Hyperthyroidism and sinusitis.	Very enlarged thyroid.	Good.
5.	Acute suppurative otitis media, right ear.	hyperthyroidism - thyroiditis in nasopharynx.	Good.
6.	(1) Chronic non-suppurative otitis media and sinusitis; (2) hyperthyroidism - thyroiditis in nasopharynx.	Otitis media; hyperthyroidism - thyroiditis in nasopharynx.	Good. Treat with X-ray therapy to nasopharynx.
7.	Hyperthyroidism - thyroiditis in nasopharynx.	Hyperthyroidism - thyroiditis in nasopharynx.	Good.

TABLE III
(continued)

Case number	Diagnosis	Cause	Prognosis
(1)	(2)	(3)	(4)
8.	Hyper tonsils and adenoids.	Congested tube from tonsil and adenoid infection.	Excellent. Appointment for operation, June 24.
9.	External Ear infection. Impetigo of rt. ear and dermititis. Post-auricular, with gland involvement and nerve loss.	Catarrhal condition of the ear.	Questionable, with nerve involvement.
10.	Diseased tonsils and adenoids.	Unknown.	Good. Tonsil and adenoid operation performed.
11.	No medical care.	--	--
12.	No medical care.	--	--
13.	Negative.	Wax in ears.	Good.
14.	Progressive deafness, left ear.	Post-operative mastoid scar tissue.	Poor, left ear.
15.	No medical care.	--	--
16.	Conduction hearing loss, Bilateral loss, greatest in conversational area.	Question of otitis media.	Hearing will not improve, but tonsil and adenoid operation advised.
17.	No medical care.	--	--
18.	No medical care.	--	--
19.	Acute otitis media.	Otitis media.	Good.
20.	Question of otosclerosis.	Unknown.	Questionable.
21.	Hypertrophied lymphoid tissue in nasopharynx. Conductive deafness, both ears.	Hypertrophied lymphoid tissue in nasopharynx.	Good.

TABLE III
(concluded)

Case number	Diagnosis	Cause	Prognosis
(1)	(2)	(3)	(4)
22.	Catarrhal deafness due to mastoiditis and otitis media.	Mastoiditis and otitis media.	Poor.
23.	Catarrhal sinusitis.	Catarrhal sinus- itis.	Good.
24.	Discharging ears. Perforation of both drums.	Catarrhal condi- tion of ears.	Questionable.
25.	Total deafness, left ear. Chronic rhinitis.	Unknown.	Poor.
26.	Oto-sclerosis.	Unknown.	Chance of re- covery, 50 per cent with fenestration operation.
27.	(1) Probable con- duction deafness of unknown origin; (2) Question of oto-sclerosis.	Unknown	Unfavorable for left ear, good for rt. ear.
28.	Right otomyeosis.	Unknown.	Good.
29.	Bilateral conduc- tion hearing loss. Atresia of canal.	Congenital at- resia of canal.	Good possibil- ity operation will improve hearing.
30.	Bilateral conduction hearing loss, due to mastoiditis.	Mastoiditis, and superficial post- aural abscess.	Poor.
31.	Bilateral nerve-type hearing loss.	Unknown.	Hearing will not improve.
32.	Undiagnosed.	Unknown.	Unknown.
33.	Pain and discharge, right ear.	Catarrhal dis- charge.	Good.

On Table IV indicates the diagnoses relating to 28 of the students used in this study, as shown in the form of a summary of medical information.

TABLE IV
SUMMARY OF MEDICAL INFORMATION:
DIAGNOSES

Diagnosis	Frequency
(1)	(2)
Bilateral conduction hearing loss	6
Nerve deafness, left ear	4
Hypertrophied tonsils and anedoids	4
Hypertrophied lymphoid tissue in nasopharynx	2
Sinusitis	2
Chronic middle ear catarrh	2
Negative	2
Question of oto-sclerosis	2
Oto-sclerosis	1
Acute suppurative otitis media, right	1
Acute otitis media, left	1
Chronic non-suppurative otitis media and tubitis	1
External ear infection with gland involvement	1
Catarrhal deafness due to mastoiditis and otitis media	1
Chronic rhinitis	1
Total deafness, left	1
Right Otomyeosis	1

TABLE IV
(concluded)

Diagnosis	Frequency
(1)	(2)
Pain and discharge in the right ear	1
Discharge in both ears	1
Perforation of both drums	1
Atresia of canal	1
Undiagnosed	1

It will be seen that Table IV shows twenty-two different diagnoses for 28 students, as well as the frequency with which each occurred. Some physicians gave as many as three diagnoses on one student. According to the figures obtained during this study, the diagnosis that was given most often was that of the nerve-type hearing loss affection, one or both ears.

On the following Table may be seen the different causes assigned for the twenty-two diagnoses indicated on Table IV.

TABLE V

SUMMARY OF MEDICAL INFORMATION:
CAUSES

Cause	Frequency
(1)	(2)
Unknown	9
Hypertrophied Lymphoid Tissue in the Nasopharynx	3
Catarrhal condition	3
Sinusitis	2
Hypertrophied Tonsils and Adenoids	2
Chronic Non-suppurative Otitis Media and tubitis	1
Nerve type	1
Congested Tube from Tonsils and Adenoid infection	1
Post-operative Mastoid Scar Tissue	1
Question of Otitis Media	1
Acute Otitis Media	1
Chronic Otitis Media	1
Mastoiditis and Otitis Media	1
Congenital Atresia of Canal	1
Wax in ears	1
Mastoiditis and superficial post-aural abscess	1
Question of a blow	1

It will be seen by Table V that the cause for deafness was unknown in nine of the different diagnoses given. There were seventeen different causes assigned for the twenty-two different diagnoses indicated on Table IV. On Table V each cause, and the frequency with which each occurred, has been shown for the twenty-eight students.

On the following Table may be seen the prognoses and their frequency, in the form of a summary of medical information, of twenty-eight students used in this study who had medical care.

TABLE VI
SUMMARY OF MEDICAL INFORMATION
REGARDING 28 STUDENTS USED IN THIS STUDY WHO HAD
MEDICAL CARE: PROGNoses

Prognosis	Frequency
(1)	(2)
Good for both ears	14
Poor for both ears	4
Poor for left ears	3
Questionable for both ears	3
Questionable for right ear	1
Questionable for left ear	1
Fair for left ear	1
Unknown	1

It may be readily seen, by Table VI, that fourteen of the students used in this study will may be completely cured under medical care. The other fourteen, of the twenty-eight who had medical care, probably will not recover completely: their chances are anywhere from unknown to poor, for both ears.

The following table stresses the type of medical care given to the 33 pupils under discussion in this study, and the percentage of those who sought such care.

TABLE VII

PERCENTAGE OF 33 PUPILS BEING STUDIED WHO SOUGHT TO HAVE MEDICAL CARE; AND WHERE THEY WENT FOR IT

	Medical care at some time	Went at once to ear spec.	Went to the family physician	Went to the clinic	Referred by family physi. to ear spec.	Referred by fam.physi. to ear spec.; to clinic
	(1)	(2)	(3)	(4)	(5)	(6)
No. of pupils	28	12	9	10	3	1
Per cent	85	36	27	30	9	3

As indicated by Table VII, twenty-eight pupils out of a total of 33, or 85 per cent, were given medical attention for hearing loss at some time. Twelve, or 36 per cent, representing the largest group, went to an ear specialist for care; ten, or 30 per cent, went to clinics; and the smallest number, or nine, 27 per cent, went to their family physician. That is, although twenty-seven families, or 81 per cent, claimed they had family physicians, only nine of those, or 27 per cent, went to him about their child's ears. Only three of the family physicians sent their patients to ear specialists, and only one ear specialist referred his patient to a clinic.

On Table VIII there is indicated the number of pupils, among the group of 33 studied, who received medical care, recently, and also the pupils who never received care, at all.

TABLE VIII

PERIOD OF YEARS IN WHICH THE 33 PUPILS BEING STUDIED HAD MEDICAL CARE

Type of Case	No. of Cases	Medical care in 1947-48	Medical care in 1946-47	Medical care prior to 1946	No medical care at all.
(1)	(2)	(3)	(4)	(5)	(6)
New	23	16	2	-	5
Old	10	6	2	2	-

It will be seen, by Table VIII, that 22 pupils, of the 33 pupils studied, had medical care given to them, this fall, after the parents had been notified. Sixteen of these were new cases, while six represented the children of families whose parents well knew that their sons, or daughters, suffered a hearing loss. Two pupils, new to the school, had had treatment for their ears in 1947, and two, not before known to the school, also had received previous medical care. Two other pupils in the group studied, have had no recent care taken of their ears: one was treated last in 1945, and the other, in 1942. Five of the students, as yet, have not had any care taken of their hearing difficulty.

On Table IX, the various steps that were necessary in arranging for medical care for the pupils being studied, have been described.

TABLE IX

RESPONSE OF PUPILS IN THE GROUP BEING STUDIED TO THE
SCHOOL NOTIFICATION OF THE NEED OF MEDICAL CARE

No. of parents noti- fied	Those acting on the first notice receiv- ed.	Those who sought care on first notice plus a student interview	Care sought after first notice plus interview plus a home visit	Care sought on first notice plus student interview plus home visit, plus a tele- phone call.	Other steps
(1)	(2)	(3)	(4)	(5)	(6)
33	9	3	5	3	2
Percent- age	27	9	15	9	6

A review of Table IX serves to show that 27 per cent of the parents required only one notification before taking their children for medical care. In the case of three students, or 9 per cent, it became necessary to interview them to see if they had been given care. Five of the students, or 15 per cent, did nothing until the home visitor had seen the parents and pointed out the advisability of taking their children for medical care. Three students, or 9 per cent were given care; but pressure was needed to get the parents to take two children to be examined: in one case, money was lacking, so funds were provided; and in the other, a second home visit had to be made.

It may be seen, therefore, that although 73 per cent of the parents, of the group of pupils studied, had to be sent more than one notification before they were willing to take their sons, or daughters, to get medical care, but did so after they were shown the need, the assumption is, that if a sufficient amount of follow-up work were to be done along such lines, at regular periods of time, eventually the majority of the students in schools would have their hearing losses corrected.

On Table X is shown the actual amount of follow-up work found to be necessary by the schools in order to make sure that the parents, of this group being studied, took their sons, or daughters, to get adequate medical care.

TABLE X

NUMBER AND TYPES OF INTERVIEWS REQUIRED IN CASE OF
33 FAMILIES TO MAKE SURE THAT THE GROUP OF
PUPILS BEING STUDIED RECEIVED MEDICAL
CARE

No. of home visits made.	No. of parents inter- viewed.	Parents seen at home.	Parents seen at school.	Parents seen at their place of business.	Interviews held with relatives.	No one at home.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
39	32	29	4	2	2	10

Of the thirty-two parents interviewed, according to Table X, twenty-nine were interviewed at home, four at school,

two at business, and some of them were seen both at home and at the school. At the time of the first visit, there was no one at home in ten homes. The mother was the parent most often interviewed, but sometimes both father and mother were seen. In only one case was the mother not seen at all. Twelve telephone interviews with mothers took place.

Other contacts became essential, however, in order that the schools, involved in this study, might be enabled not only to help the parents of the children being studied to secure medical care, but also to make sure that efficient records were kept regarding each case. These contacts have been enumerated on Table XI, according to number and type.

TABLE XI

NUMBER AND TYPE OF INTERVIEWS REQUIRED IN CASE OF THOSE OTHER THAN PARENTS, OR RELATIVES, TO MAKE SURE THAT THE 33 PUPILS BEING STUDIED SHOULD RECEIVE SOME MEDICAL CARE

No. of inter-views with pupils.	No. of interviews with teachers	No. of visits to doctors' offices.	No. of visits made to clinics.	No. of interviews held with others, such as nurses and secretaries.
(1)	(2)	(3)	(4)	(5)
51	36	5	2	13

As will be seen by Table XI, a great many visits had to be paid in order to make the proper contacts for the pupils being studied, to have their hearing losses corrected. As e-

numerated in the Table, there were interviews held with social workers and school nurses, doctor's office nurses and hospital nurses, and secretaries, as well as with the doctors themselves. In all, besides these interviews, there were held nineteen telephone conversations with doctors, nurses, social workers and secretaries.

CHAPTER IV

DISCUSSION OF THE DATA

In reviewing the data gathered concerning the school children, thirty-three in number, used as a basis for this study, two aspects of the subject loom up, namely, the social implications of the different procedures involved in dealing with the cases; and the reasons advanced by parents for their neglect in providing medical care for those of their children who suffer a hearing loss.

I. SOCIAL IMPLICATIONS

When questions were put to parents and teachers in regard to social adjustments of students who failed the audiometer test, the answers received were varied, however much they might resemble each other in some respects.

In the 3rd grade hard of hearing group, for example, are to be found the so-called babies, children who having suffered much from hearing difficulties and ear affections, had been pampered at home. These pupils were not well adjusted, socially or otherwise, as compared with the other children in the room, different teachers stated. Among the nine 3rd grade pupils who has a hearing loss, not one teacher was able to report a good student. For even a slight handicap in hearing serves to retard a child's school progress to the point that he may be looked upon as lacking in intelligence, even though his flashes of intelligence, when he has heard what is going on, may

sometimes puzzle the teacher. "Defective hearing was, and still is, more of a handicap than defective vision, since linguistic ability is at a great premium in the oldfashioned curriculum."¹ None of the pupils in the 3rd grade seemed to be sensitive regarding their hearing loss, although some knew that it did exist.

In the 4th grade, there was one pupil only who suffered a hearing loss, a shy, quiet and retiring child, with very poor vision. She has only recently acquired glasses, and gives the effect of peering all the time. Her hearing loss is in both ears, and although not very serious, her teacher had suspected it. The latter remarked, "she looks dumb, she acts dumb, but she really is not dumb." The cause of her hearing loss has been corrected, and she will probably improve.

Among the four pupils in the 5th grade, there is one who is quite sensitive if her hearing loss is referred to at all, and her family try never to mention it. Her hearing loss is quite obvious, nevertheless she adjusts well in the group. The other three pupils have been reported as being well-adjusted. They never give trouble in the room, and the teacher was surprised to learn that they had hearing loss.

In the 6th grade there are two pupils who speak scarcely above a whisper, so quietly that they can scarcely be heard.

¹ Marian E. Breckenridge and E. Lee Vincent, Child Development (Phila and London: W.B.Saunders Company, 1943), p.49.

Their amount of hearing loss is such that they hear only as if others were speaking in whispers. One of them, a shy, quiet child who is a slow student, is quite concerned about her hearing loss and, as well, her mother reports, is rather sensitive about it. The other pupil is a daydreamer, and most lackadaisical. The other two pupils in the 6th grade, apparently, present less of a problem, except that one sometimes makes a disturbance in the classroom, not because of her hearing loss, so that the teacher has given her a seat directly in front of her desk.

It is in the Junior High School group, where there are four students with hearing loss, that is found the first, definitely anti-social personality. This pupil, a boy, has been a problem ever since he came into the school; he will probably leave as soon as he is sixteen, and none of the teachers will be sad to see him go. He is rude and surly, and he saunters around with a so-called 'chip on his shoulder.' His mother feels that the pain he does have in his ears may be partly responsible for his disposition. He had a mastoid, at which time he was given a plastic adjustment, but it did not hold. He himself says that he has no pain in his ear, yet, whenever he has a cold it begins to discharge, and his mother thinks that pain must accompany such a drainage, especially since, she has noticed, it makes him more irritable than at other times.

When the family physician was asked to fill out a form

on this student, he telephoned him and asked him to come in to have his ears checked up, but the lad refused to go in spite of all the persuasions the school could use. The other three students in this group are good students. They know that they have a hearing loss and all are somewhat sensitive about it. One of the boys is shy, retiring, and never volunteers any information. All three of these Junior High pupils have a complete loss of hearing in one ear.

Of the eight Senior High School pupils who have a hearing loss, one was quite anti-social when he first entered the school, but he is getting over it to some degree. He is superior in shop work and responds well there. Frequently, in class, he makes peculiar facial expressions so as to attract attention. Two other boys in the High School also are rather anti-social. For example, one of them, who always has had a heart condition and is most sensitive about it--so much disturbed about it that his family never mention it in his presence for fear of his reactions--constantly insists that there is nothing the matter with his ears. Happily, his hearing loss has lessened with the years. He is a slow learner. At home he seems rude and surly; he refuses to return to the hospital for a follow-up; and, if he can help it, he will not come to the school office if he suspects that it may bring up some discussion of his disabilities. The other boy with anti-social tendencies, does not adjust well in class. The teachers contend that his mother pets and pampers him too

much. He too refuses to return to the hospital for a check-up, even though his hearing loss is increasing each year. He is to be graduated this year; and the vocational rehabilitation worker has done her best to persuade him, and his family, of the need to continue to have medical care; but he cannot be influenced. Still another boy in this group, called odd by his teachers, worries his mother because he does not have any friends of his own age, which she thinks is because he finds that he cannot compete with them. However, he gets along very well with older people and with his teachers, and his social adjustment is improving each year. The last boy of this group has no noticeable peculiarities of manner and seems to adjust well in spite of his hearing loss. This lad plans to do something about his hearing.

There are three girls in the Senior High School group who suffer from hearing loss. One, who is definitely hard of hearing, is neither shy nor sensitive and adjusts very well. Another, who suffers a serious hearing loss, has been rather evasive. She is sure that her difficulties do not come from her hearing, and that the audiometer test was incorrect. She is most sensitive and cries if the subject of her hearing be mentioned; and she declares that she will not go back to the ear specialist for a check-up. For, although, at first, she denied that she ever had any ear trouble, it came out finally that she once had a mastoid operation; and, some years later, she also had treatment by an ear specialist for an ear in-

fection. The third girl has a very negative personality, and is most immature. She has to work extremely hard for anything that she gets.

There are three pupils with hearing loss in the Special Classes. Two of them are very slow pupils, moreover, the teachers are of the opinion that their lack of hearing does not account for all of their difficulties. The other pupil has a very great hearing loss, and also has many characteristics of poor social adjustment. She has secured a new hearing aid, but because she is so shy she has not yet had courage to wear it to school. She is so sensitive that she feels she would rather not hear than be looked upon as different in the group. It will be necessary for her to attend a class this summer in order to learn how to use her hearing aid. In addition, she has a speech defect that, the doctors feel, might have been caused by her lack of hearing.

II. REASONS WHY PARENTS DO NOT TAKE THEIR CHILDREN FOR MEDICAL CARE

On the first home visit there were found twelve parents who had taken their children for medical care, leaving twenty-one, of the group studied, who had not.

The reasons given by the parents for not taking their children to have medical care were various: for example, three of the parents gave sickness, births or deaths in the family as a reason for not attending to it; three parents considered it unnecessary; three of them claimed a lack of time

as an excuse; two parents admitted that they had no good reason to offer; two parents said they could not afford it; two of them insisted that they had never been notified; one said she was planning to take her daughter for medical care this summer; and one stated that her child's case is being followed by her own otologist, to whom she was taken regularly. The parents of four High School pupils consider that they must secure their children's consent before having medical care, since they do not desire to exert too much control over them, or else this control is no longer possible. Two of the parents had urged their children to seek medical care, and the latter will probably do so. The remaining two parents in the group cannot be relied upon to do much of anything, that is, unless the hearing difficulties of the students concerned become much more complicated than they are at present.

CHAPTER V

CONCLUSIONS AND PROPOSED USE OF THE DATA

I. CONCLUSIONS

The data reported in this study indicates, that the majority of children in time will be given medical care, if they have adequate follow up from the school.

Already, since the notifications were sent, in the fall of 1947 and through the year until May 1948, two students with diseased tonsils and adenoids have had them removed, three others have made appointments to have them removed this summer, and the operation recommended for another is being considered by his parents. One lad, whose ears were negative to the test, was sent to have a ^{chest} X-Ray, two others are being carefully studied by a group of ear specialists, with a view to possible surgery being done on their ears; and one girl was fitted to, and has acquired, a hearing aid. Treatment has ranged from the simple removal of wax from the ears to X-Ray treatments and radium therapy.

Thus it would seem as if the parents, pupils and teachers have become aware that when a pupil fails the audiometer test medical care is important, while as to family physicians and otologists who have had anything to do with this study, those who were asked to fill out questionnaires, they are becoming increasingly aware of the important part the schools are playing in follow-up work with these hard of hearing pupils.

II. PROPOSED USE OF THE DATA

The collection of data, with the conclusions drawn from what has been found, will be of value only if the different school authorities use such data in the improvement of school health programs.

Administrative procedures for improving the school health program as it pertains particularly to hearing:

1. Teach lip-reading to those students who have been recommended to take it by their medical advisors. The medical sheet that has been filled out on each pupil gives the necessary information.
2. There should be a more definite follow-up in connection with all defects, the question being, where the school best can spend the money, if there is not enough money for both testing and follow-up. With only about 27 per cent of the parents taking any action on school notices sent to them, the need for more adequate follow-up seems apparent.
3. A fund should be set up for providing medical care for children who show a hearing loss, and whose parents are unable to pay for care. This problem might be solved by the formation of a Community Council, such as was formed, recently in Watertown.
4. It would seem desirable to offer parental education on the subject of hearing to PTA groups, Mother's Clubs, and Adult Home Nursing groups, with emphasis placed on the fact that deafness is not necessarily an affliction affecting only the

senile part of the population, since children, even though they do not seem to be hard of hearing, still may need (and, in that case, should have) medical care.

Guidance procedures.

1. The medical sheet that has been obtained from the family physicians, ear specialists, and clinics, should be made a part of the student's cumulative record.
2. Pupils in the High Schools should be referred for Vocational Rehabilitation.

Instructional procedures.

1. Pupils should be placed where they can hear the teacher, and away from noisy fans, and as far away as possible from outside noises.

APPENDICES

- A. The Sample Audiometer Sheet
- B. Sample of Notice sent Home.
- C. Questionnaire for Student if He had Medical Care
- D. Questionnaire for Student if He did not have
Medical Care
- E. Questionnaire for Teacher
- F. Questionnaire for the Parent if the Student did
have Medical Care
- G. Questionnaire for the Parent if the Student did
not have Medical Care
- H. Questionnaire for the Physician, Ear Specialist or
Family Physician

Glossary,

APPENDIX

- A. The Sample and Answer Sheet
- B. Sample of Notice sent Home.
- C. Questionnaire for Student if he had Medical Care
- D. Questionnaire for Student if he did not have Medical Care
- E. Questionnaire for Teacher
- F. Questionnaire for the Parent if the Student did have Medical Care
- G. Questionnaire for the Parent if the Student did not have Medical Care
- H. Questionnaire for the Physician, Eye Specialist or Family Physician

Chicago.

A. THE SAMPLE AUDIOMETER SHEET

NAME _____
 AGE _____
 SCHOOL _____
 GRADE _____
 DATE _____

**DO NOT MAKE ANY NOISE
 AS IT WILL SPOIL THE TEST**

INSTRUCTIONS

YOU WILL HEAR NUMBERS SPOKEN BY A PERSON WHO IS MOVING
 AWAY FROM YOU. THE VOICE WILL GET WEAKER AND WEAKER.
 LISTEN CAREFULLY AND WRITE AS MANY NUMBERS AS YOU CAN.

HEARING Loss	RIGHT EAR				LEFT EAR				HEARING Loss
	1	2	3	4	5	6	7	8	
30									30
27									27
24									24
21									21
18									18
15									15
12									12
9									9
6									6
3									3
0									0
-3									-3

HEARING LOSS _____ HEARING LOSS _____

HISTORY

DID YOU EVER HAVE AN ACHE OR PAIN IN YOUR EAR? _____ WHICH EAR? _____ WHEN? _____

DID YOU EVER HAVE A RUNNING EAR? _____ WHICH EAR? _____ WHEN? _____

DOES IT RUN NOW? _____

DID YOU EVER HAVE NOISES IN YOUR EAR, LIKE BUZZING, HISSING OR ROARING? _____

WHICH EAR? _____ WHEN? _____

HAVE YOU HAD YOUR TONSILS OUT? _____ WHEN? _____

IS THERE ANY DEAFNESS IN YOUR FAMILY? _____ WHO? _____

B. REPORT OF AUDIOMETER TEST

Mr.

Dear Sir:

Two audiometer tests of hearing were given.....

.....19..... with the result thathe shows a hearing
loss of per cent in the right ear per cent in the left ear.
This indicates a condition that makes it seem advisable that you
seek the advice of your family physician.

The school health staff will gladly cooperate with you in
helping to improve your child's condition.

Will you please reply on attached form?

Very truly yours,

FRANCIS A. KELLY, Superintendent of Schools

AUDIOMETER TEST OF

..... Grade School

FRANCIS A. KELLY

Superintendent of Schools

Watertown, Massachusetts

Dear Sir:

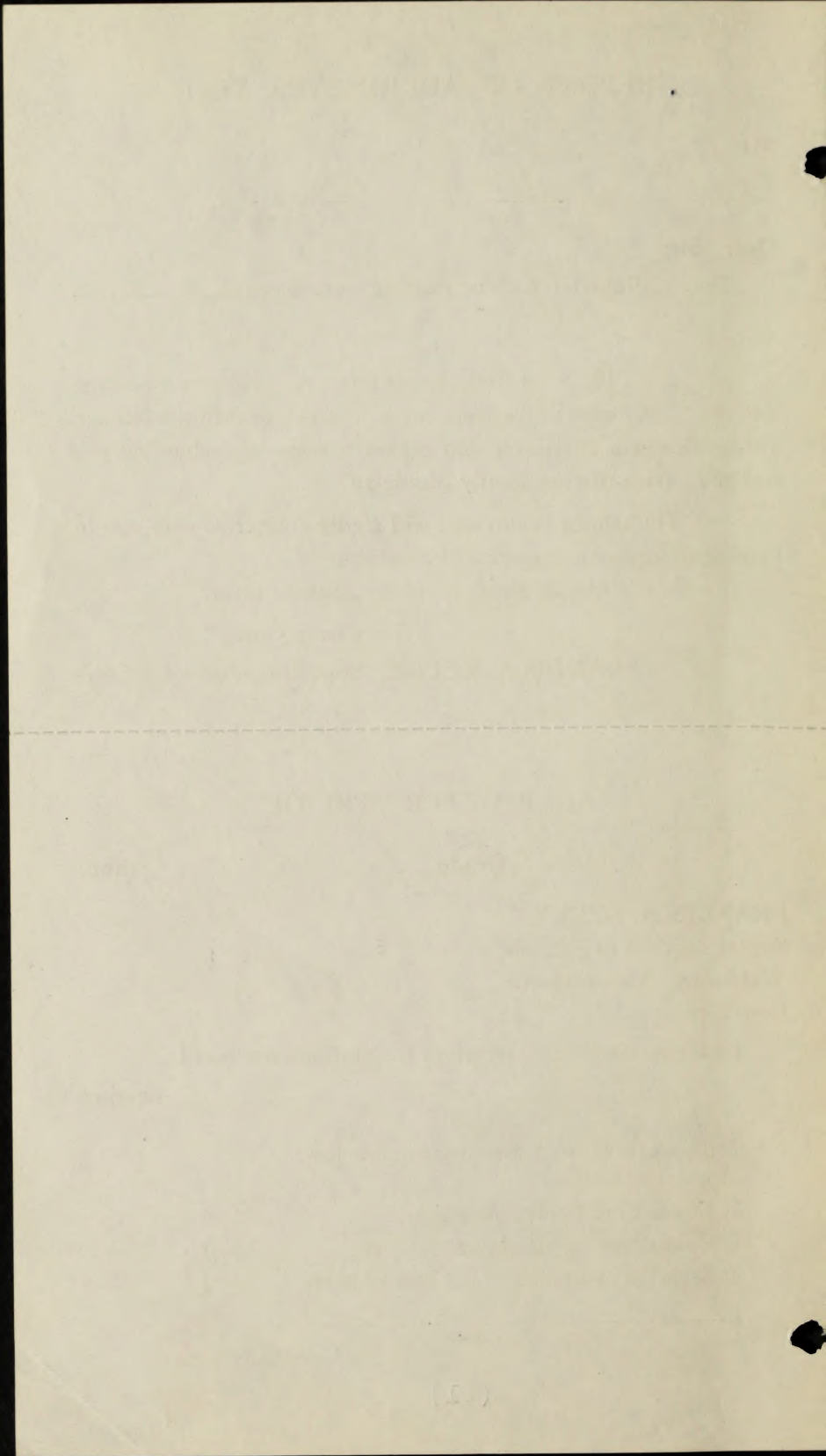
I have received your report of the audiometer test of
.....hearing

I plan to follow the course indicated below:

Check one of the following

1. Consult my family physician ()
2. Consult an ear specialist ()
3. Seek the assistance of the school nurse ()
4.

Very truly yours,



C. STUDENT QUESTIONNAIRE

(For use of one who had received medical care for ears)

Name of Student _____ Telephone No. _____

Address _____ Date of Birth _____

1. Did you go to your family physician first? _____
2. Were you referred by your family physician to an ear specialist or to a clinic? _____ Name. _____
3. Did you go directly to an ear specialist? _____
Name. _____
4. Did you go directly to a clinic? _____ Name. _____
5. How many times have you been to:
(a) Your family physician? _____
(b) Your ear specialist? _____
(c) The clinic? _____
6. Did you receive treatment? _____
7. Kind of treatment? _____
8. Approximately how long will you have to go to:
(a) Your family physician? _____
(b) Your ear specialist? _____
(c) The clinic? _____
9. Has the condition been discussed at home? _____
10. Has a hearing aid been recommended? _____
11. Do you wear a hearing aid? _____
12. Has a lip-reading class been recommended? _____
13. Do you attend a lip-reading class? _____
Where? _____
14. How long have you been attending a lip-reading class?

15. Have you a history of ear trouble? _____

16. Is this the first school notification received? _____

For use of one who has received a hearing aid.

Name of patient _____

Address _____

1. Did you go to your family physician?

2. Were you referred by your family physician to a specialist or to a clinic?

3. Did you go directly to an ear, nose and throat specialist?

4. How?

5. Did you go directly to a specialist?

6. How many times have you been to the clinic?

(a) Your family physician?

(b) Your ear, nose and throat specialist?

(c) The clinic?

7. Did you receive treatment?

8. What treatment?

9. Approximately how long did you have to wait?

(a) Your family physician?

(b) Your ear, nose and throat specialist?

(c) The clinic?

10. Has the condition been discussed at home?

11. Has a hearing aid been recommended?

12. Do you wear a hearing aid?

13. Has a lip-reading class been recommended?

14. Do you attend a lip-reading class?

15. Why?

16. How long have you been attending a lip-reading class?

17. Have you a history of ear trouble?

18. In what the first annual examination received?

D. STUDENT QUESTIONNAIRE

(To one who had not received medical care for his ears)

Name of Student _____

Address _____ Telephone No. _____

Date of Birth _____

1. Do you have a family physician? _____

2. Did your family receive notification regarding your ears?

3. Did you go to your :

(a) Family physician? _____

(b) Ear specialist? _____

(c) Clinic? _____

4. Why have you not gone to:

(a) Your family physician? _____

(b) Your ear specialist? _____

(c) The clinic? _____

5. Has there been any discussion at home regarding taking
you to have medical care? _____

3. STATEMENT OF PHYSICIAN

(Two One who has not received medical care for his ears)

Name of student _____
Address _____
Telephone no. _____
Date of birth _____

1. Do you have a family physician?
2. Did your family receive notification regarding your ears?

3. Did you go to your:
(a) Family physician?
(b) Ear specialist?
(c) Clinic?

4. Why have you not gone to:
(a) Your family physician?
(b) Your ear specialist?
(c) The clinic?

5. Has there been any discussion at home regarding taking
you to have medical care?

E. TEACHER QUESTIONNAIRE

Teacher _____

Name of Teacher _____

Name of student _____

1. Did you know that the student was hard of hearing?'' _____

2. Were there any indications of it in class? _____

3. What are these peculiarities? _____

4. Does his condition retard his progress? " _____

If so, in what way? _____

5. Has he been placed near the front of room? _____

6. Do other children in the room treat student differently
because of his condition? _____

E. Teacher, J. Student

Teacher

Name of Teacher

Name of Student

1. Tell me how that student was hard of hearing?

2. Were there any indications of it in class?

3. What are these peculiarities?

4. Does his condition retard his progress?

If so, in what way?

5. Has he been placed near the front of room?

6. Do other children in the room treat student differently?

Because of his condition?

F. PARENTS' QUESTIONNAIRE
(Used if student had had medical care for his ears)

Name of Student _____

1. Do you have a family physician? _____
2. Did you have your son (daughter) go to the family physician about ear condition? _____
3. Did your family physician recommend an ear specialist?

4. Did you go to an ear specialist immediately, or directly? _____
5. Did you go to a clinic directly? _____
6. Did you personally accompany your child? _____
7. How soon after notification did your child seek medical aid? _____
8. Was treatment recommended? _____
9. Was treatment carried out? _____
10. Is your child to return for treatment? _____
When? _____
11. Probable length of time? _____
12. Does student realize the condition of his ears? _____
13. Has it ever been discussed at home? _____
13. Is there any deafness in the family? _____
Who? _____
When? _____
14. Was this the first notification you have received? _____
15. If not, how often have you been notified? _____
16. If this was the first notification, had you noticed the defect? _____
17. History of ear defect; tonsils and adenoids removed? _____
ear aches? _____
discharging ears? _____
mastoid operation? _____
18. Is student sensitive regarding his condition? _____

G. PARENTS' QUESTIONNAIRE

(Used if the student had not had medical care for ears)

Name of Student _____

1. Were you notified regarding condition of the student's ears? _____

2. Do you have a family physician? _____

3. Why have you not taken the student to:

(a) your family physician? _____

(b) your ear specialist? _____

(c) the clinic? _____

4. History of ear defect:

(a) tonsils and adenoids removed? _____

(b) ear aches? _____

(c) discharging ears? _____

(d) mastoid operation? _____

5. Are you planning to take him for medical care? _____

To whom? _____

When? _____

6. Will you notify the school when you do take him? _____

6. FARMER'S QUESTIONNAIRE
(Used if the student has not had medical care for ears)

Name of student _____

1. Were you notified regarding examination of the student's

ears? _____

2. Do you have a family physician? _____

3. If you have not seen the student for:

(a) your family physician? _____

(b) your ear specialist? _____

(c) the clinic? _____

4. History of ear disease:

(a) tonsils and adenoids removed? _____

(b) earache? _____

(c) discharging ear? _____

(d) mastoid operation? _____

5. Are you planning to take him for medical care?

To whom? _____

When? _____

6. Will you notify the school when you have him? _____

H. PHYSICIAN'S QUESTIONNAIRE

Name of Physician _____

1. Did you see the patient? _____ Approx. date? _____

2. What was your diagnosis of the case? _____

3. What is his prognosis? _____

4. Is the patient to return? _____

5. When? _____

6. Is treatment recommended? _____

7. Cause of ear defect? _____

8. Do you advise a hearing aid? _____

9. Do you advise a lip-reading class? _____

2. THE PATIENT'S TESTIMONY

Name of Physician _____

1. Did you see the patient? _____ Approx. Date? _____

2. What was your diagnosis of the case? _____

3. What is his prognosis? _____

4. Is the patient to return? _____

5. When? _____

6. Is treatment recommended? _____

7. Cause of ear defect? _____

8. Do you advise a hearing aid? _____

9. Do you advise a lip-reading class? _____

GLOSSARY

- Atresia.--Imperforations, absence of a normal opening.
- Conduction.--Transference of nerve impulse.
- Congenital.-- being present at birth.
- Diagnosis.--a prediction as to the probably result of an attack of a disease.
- Fenestration.--The act of perforating, condition of being pierced with openings.
- Hypertropied.--Morbid enlargement of an organ or part.
- Mastoiditis.--Inflammation in the temporal mastoid process.
- Nasopharynx.--Part of the pharynx above the soft palate.
- Otitis media.--Inflammation of the middle ear.
- Otologist.--An ear specialist.
- Otomyces.--Disease of ear due to presence of otomyces.
- Otomyces.--Genus of fungi infesting the ear.
- Oto-sclerosis.--The formation of spongy bone in the capsule of the labyrinth of the ear; the labyrinth being the internal ear made up of the vestibule, cochlea, and canals.
- Post-auricular.--Behind the flap of the ear.
- Prognosis.--A prediction as to the probable result of an attack of a disease.
- Rhinitis.--Inflammation of the mucous membrane of the nose.
- Sinus.--A recess, cavity, or hollow space.
- Sinusitis.-- Inflammation of a sinus, especially the maxillary sinus; the maxillary sinus pertaining to a jaw, or a jaw bone.
- Suppurative.-- A discharge of pus.
- Tubitis.--Inflammation of the canal extending from nasopharynx to typanum.
- Typanum.--The middle ear.

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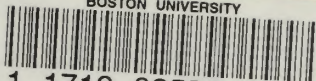
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